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Klamath Falls, Oregon 97603

August 2002

# Klamath Falls Resource Area

## *Annual Program Summary*

and

## *Monitoring Report* Fiscal Year 2001

HD  
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2001

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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Annual Program Summary and Monitoring Report - FY2001

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2001

U.S. Department of Interior  
Bureau of Land Management

Klamath Falls Resource Area

**ANNUAL PROGRAM  
SUMMARY**

and

**MONITORING REPORT  
FISCAL YEAR 2001**



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4. *[Faint, illegible text]*





# Public Input to this Document

Although the Annual Program Summary gives only a very basic and brief description of the programs, resources and activities in which the Klamath Falls Resource Area is involved, the report does give the reader a sense of the enormous scope, complexity and diversity involved in management of the Klamath Falls Resource Area public lands and resources. The managers and employees of the Klamath Falls Resource Area take pride in the accomplishments described in this report. However we also value public input on the FY2001 Annual Program Summary and Monitoring Report. In order for us to continually improve how information is displayed to the public for BLM activities in the Annual Program Summary, we request that you fill out this comment form and return it to us. It will assist us in making this document more understandable and easy to read for you.

**Please return your comments on the form on the back of this page or in any other format to:**

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Klamath Falls Resource Area  
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“Comments, including names and street addresses of respondents, will be available for public review at the above address during regular business hours (8:00 a.m. to 5:00 p.m.), Monday through Friday, except holidays, [and may be published as part of (the EA, the EIS, or other related documents)]. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.”

**Thank you for taking the time to review this document.**

/s/ Teresa A. Raml

**Teresa A. Raml, Field Manager  
Klamath Falls Resource Area**

# Environmental Impact Statement

The purpose of this study is to determine the potential impacts of the proposed project on the environment. The study will consider the following factors:

- 1. Air Quality
- 2. Noise
- 3. Water Resources
- 4. Land Use
- 5. Biological Resources
- 6. Cultural Resources
- 7. Socioeconomics
- 8. Cumulative Impacts

Prepared by:  
[Name]  
[Title]  
[Organization]

This document is a preliminary draft and is subject to change. It is intended to provide a general overview of the project and its potential impacts. The final Environmental Impact Statement will be prepared after a more detailed study has been completed.

For more information, please contact:  
[Name]  
[Phone Number]  
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# Public Input Form

## For the FY 2001 Klamath Falls Resource Area Annual Program Summary and Monitoring Report

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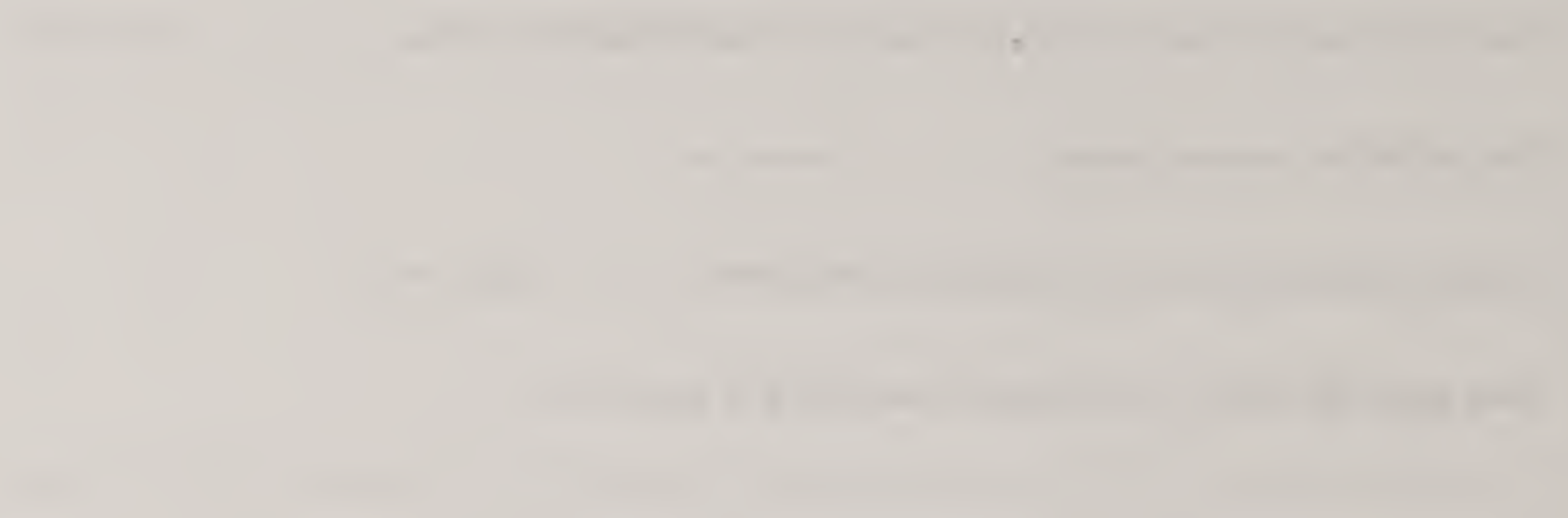
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## Orvis & Sonnet, 1962

Orvis & Sonnet, 1962, p. 10, fig. 1, map of the Klamath Falls Resource Area, Oregon, showing the location of the Klamath Falls Resource Area, Oregon, and the Klamath Falls Resource Area, Oregon, and the Klamath Falls Resource Area, Oregon.





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Activity	Frequency	Duration	Location	Notes
1. Hike	Weekly	2 hours	Forest	Observe wildlife
2. Fishing	Monthly	4 hours	Lake	Catch and release
3. Birdwatching	Daily	1 hour	Field	Record sightings
4. Planting	Quarterly	3 hours	Garden	Native plants
5. Gardening	Weekly	1 hour	Backyard	Vegetables
6. Painting	Monthly	2 hours	Studio	Landscapes
7. Reading	Daily	30 minutes	Library	Nature books
8. Writing	Weekly	1 hour	Home	Journaling
9. Photography	Weekly	1 hour	Field	Nature photos
10. Gardening	Weekly	1 hour	Backyard	Flowers

Additional notes and observations regarding the activities and resource area.

The following table provides a summary of the activities and their associated details:

Activity	Frequency	Duration	Location	Notes
1. Hike	Weekly	2 hours	Forest	Observe wildlife
2. Fishing	Monthly	4 hours	Lake	Catch and release
3. Birdwatching	Daily	1 hour	Field	Record sightings
4. Planting	Quarterly	3 hours	Garden	Native plants
5. Gardening	Weekly	1 hour	Backyard	Vegetables
6. Painting	Monthly	2 hours	Studio	Landscapes
7. Reading	Daily	30 minutes	Library	Nature books
8. Writing	Weekly	1 hour	Home	Journaling
9. Photography	Weekly	1 hour	Field	Nature photos
10. Gardening	Weekly	1 hour	Backyard	Flowers

Further details and observations regarding the resource area and activities.

# **KLAMATH FALLS RESOURCE AREA**

## **ANNUAL PROGRAM SUMMARY**

**Fiscal Year 2001**

1972-1973

1974-1975

1976-1977

# **KLAMATH FALLS RESOURCE AREA ANNUAL PROGRAM SUMMARY**

## **Fiscal Year 2001**

## **Introduction**

### **Background**

The Annual Program Summary is a review of the programs on the Klamath Falls Resource Area, Bureau of Land Management for the period of October 1, 2000 thru September 30, 2001. The Klamath Falls Resource Area encompasses the southwestern portion of the Lakeview District, in southern Oregon (see Figure 1). This program summary is designed to report to the public, and local, state and federal agencies a broad overview of activities and accomplishments for fiscal year 2001 (FY 2001). Included in the Annual Program Summary is the Monitoring Report for the Klamath Falls Resource Area in FY 2001. These reports are a requirement of the Klamath Falls Resource Area Record of Decision and Resource Management Plan. The Annual Program Summary addresses the accomplishments of the Klamath Falls Resource Area and provides information concerning the Klamath Falls Resource Area budget, timber receipt collections, and payments to Klamath County. The results of the FY 2001 Annual Program Summary show that the Klamath Falls Resource Area is fully and successfully implementing the Northwest Forest Plan.

The Monitoring Report compiles the results and findings of implementation monitoring for fiscal year 2001, the fifth full fiscal year of implementation of the Klamath Falls Resource Area Resource Management Plan (RMP). The Monitoring Report, which is basically a "stand alone" document with a separate executive summary, follows the Annual Program Summary (APS) in this document.

Implementation of the Northwest Forest Plan began in April 1994 with the signing of the Northwest Forest Plan Record of Decision. Subsequently in June 1995, the Klamath Falls Resource Area began implementation of the Resource Management Plan, which incorporates all aspects of the Northwest Forest Plan, with the signing of the RMP Record of Decision. The record decision established a new allowable harvest level effective October 1, 1994, which is the beginning of fiscal year 1995, so related activities during the entire fiscal year 1995 are included in the accomplishments reported for fiscal year 1995.

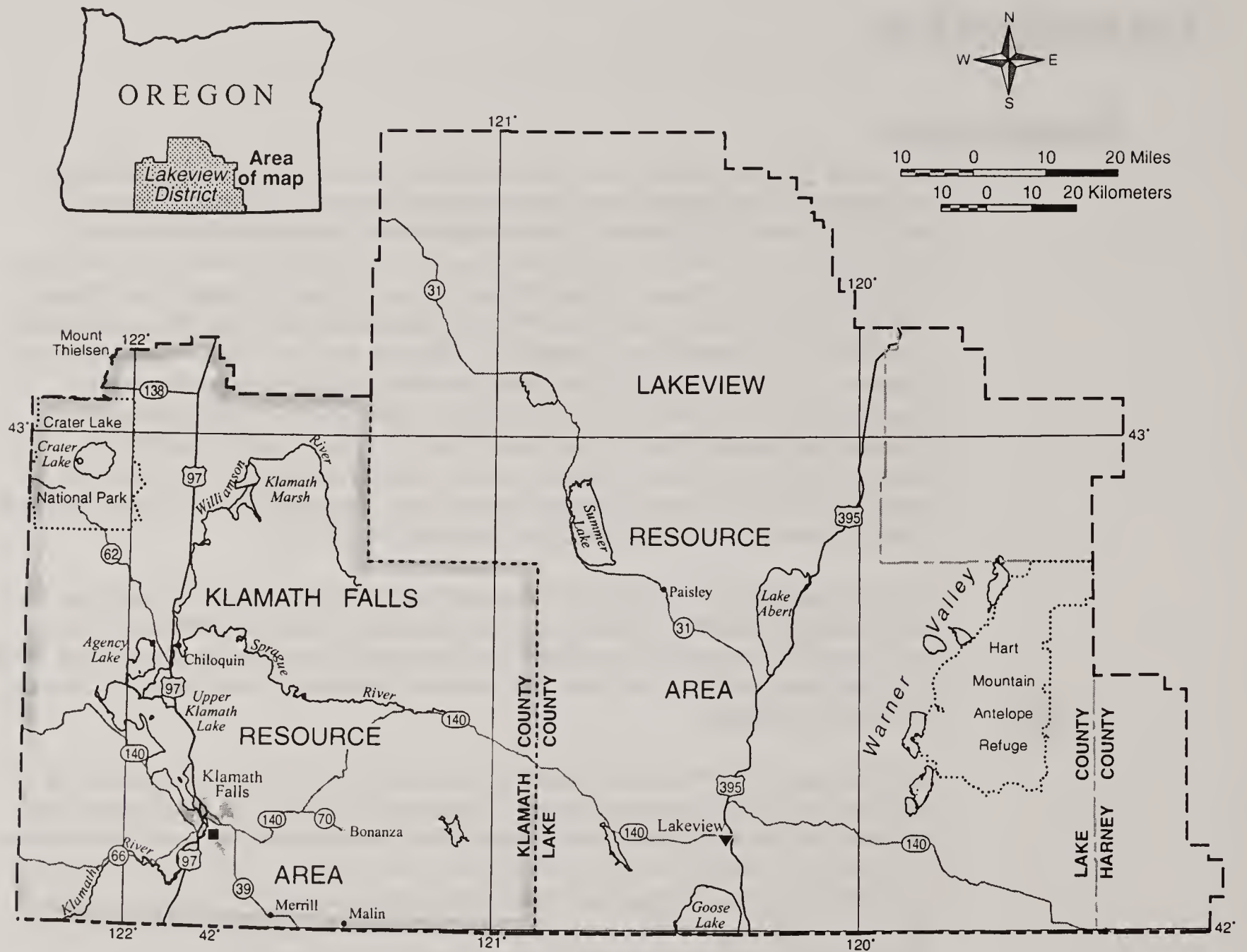
### **Third Year Evaluation**

The third year evaluation of the Klamath Falls Resource Area Resource Management Plan by Oregon State Office staff has been completed. The purpose of the third year evaluation is to determine whether there is cause for an amendment or a revision to the resource management plan. This evaluation includes reviewing cumulative monitoring results and accomplishments, determining if the plans goals or objectives are being met, determining whether goals and objectives were realistic and achievable in the first place, and determining whether changed circumstances or new information have altered activities or expected impacts. Evaluations are usually done after the third year of implementation under the RMP, but because of unforeseen problems, release of the third year evaluation for years 1995-1998 was delayed.

The evaluation was approved by the BLM Oregon / Washington State Director and made available for public review. The State Director's findings included information through Fiscal Year 1998, and stated, "I find that the Klamath Falls Resource Area RMP goals and objectives are being met or are likely to be met, and that the environmental consequences of the plan are



U.S. DEPARTMENT OF THE INTERIOR  
Bureau of Land Management  
Lakeview District  
Klamath Falls Resource Area  
**FIGURE 1 - GENERAL LOCATION MAP**  
2001



**LEGEND**

- ▼ BLM DISTRICT OFFICE
- BLM RESOURCE AREA OFFICE
- - - BLM DISTRICT BOUNDARY
- ..... BLM RESOURCE AREA BOUNDARY
- . - . STATE BOUNDARY
- (97)— U. S. HIGHWAY
- (39)— STATE HIGHWAY



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similar to those anticipated in the RMP FEIS and that there is no new information, as of September 30, 1998, that would substantively alter the RMP conclusions. Therefore a plan amendment or plan revision of the Klamath Falls Resource Area RMP is not warranted. This document meets the requirements for a plan evaluation as provided in 43 CFR 1610.4-9."

An executive summary of the resource area evaluation is available, free of charge, upon request, or is accessible "on-line" at the Klamath Falls Resource Area website: <http://www1.or.blm.gov/Lakeview/kfra/index.htm>.

## Budget and Employment

In fiscal year 2001, the Klamath Falls Resource Area had a total appropriation of \$8.3 million. This included \$300,000 for Jobs-in-the-Woods program; \$930,000 for Management of Lands and Resources (MLR); \$1,600,000 for Oregon and California Railroad Lands (O&C); \$835,000 for Forest Ecosystem Health and Recovery; \$4,200,000 for prescribed fire; \$190,000 for Pipeline Recreation; and \$231,000 for Pipeline Timber. See Table 1 for the seven-year budget trend for the Klamath Falls Resource Area.

### Jobs-in-the-Woods

The Jobs-in-the-Woods program was established to help mitigate the economic and social impacts on communities from reduced timber harvesting due to direction in the Northwest Forest Plan. This program was designed to provide jobs and incomes while investing in the ecosystem. Fiscal Year 2001 was the sixth year of this program. Projects included juniper woodland restoration, bitterbrush planting, road inventory, and fuel reduction.

### Employment

Permanent employment has been relatively stable during the past six years. In fiscal year 2001, there were 33 permanent employees on the resource area. The number of temporary, term, and co-operative education student employees varied throughout the year with a total of 63 employed at some time during the year.

## Summary of Accomplishments for the Klamath Falls Resource Area

The manner of reporting the activities differs among the various programs. Some resource programs lend themselves well to a statistical summary of activities while others are best summarized in short narratives. Tables 2 and 3 provide a summary of the accomplishments



Figure 2. Klamath Falls Field Office Sign



**Table 1. Klamath Falls Resource Area Budget**

FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
\$3,455,000	\$3,466,000	\$4,075,000	\$3,500,000	\$4,200,000	\$8,286,000

**Table 2. Summary of Activities and Accomplishments (Entire Resource Area)**

RMP RESOURCE ALLOCATION OR MANAGEMENT PRACTICE OR ACTIVITY	FISCAL YEAR 2001 ACCOMPLISHMENTS	CUMULATIVE ACCOMPLISHMENTS <sup>1</sup>	PROJECTED DECADAL PRACTICES
Regeneration harvest (acres offered)	0	39	1,310
Density management (acres offered) regulated/non-regulated	1,207 / 34	7,904 / 136	10,970
Timber sale quantity offered (MM board feet) (regulated/non-regulated)	2.963 / 0.024 MMBF	39.773 / 0.549 MMBF	63,100
Timber sale quantity offered (MM cubic feet) (regulated/non-regulated)	0.56 / 0.004 MMCF	7.66 / 0.104 MMCF	11.1 MMCF
Mortality Salvage (acres offered)	0	7,110	0
Understory Reduction (acres)	419	2,471	4,400
Site preparation (acres)	28	379	2,500
Vegetation control, fire (acres)	0	0	250
Prescribed burning (hazard reduction acres)	0	320	2,500
Prescribed burning (wildlife habitat and forage enhancement acres)	0	1,000	7,400
Natural or artificial ignition prescribed fire for ecosystem enhancement (acres)	1,200	37,241	up to 75,000
Vegetation control, mechanical/hand (acres)	400	1,835	2,250
Animal damage control (acres)	0	1,017	4,150
Pre-commercial thinning (acres)	265	823	700
Brush field/hardwood conversion (acres)	0	0	0
Planting/ regular stock (acres)	97	1,561	3,600
Planting/ genetically selected (acres)	0	0	1,150
Fertilization (acres)	0	0	320
Pruning (acres)	0	43	290
Noxious weed control, chemical (sites/acres)	220/245	220/245 annually <sup>2</sup>	200-220/205-260 annually <sup>2</sup>
Noxious weed control, other (sites/acres)	3/15	33/305 <sup>6</sup>	60/550 <sup>6</sup>
Livestock grazing permits or leases (total/renewed units/animal unit months)	10 grazing permits 1,444 AUMs	75 grazing permits 19,184 AUMs	150 grazing permits <sup>3</sup> 25,000 AUMs
Reservoirs or springs constructed/developed (ea)	1	4	5
Livestock fences constructed (units/miles)	0/0 mi.	11/12.0 mi.	18/25.0 mi.
Rangeland Health Standards Assessments (# completed, acres)	4 Assessments <sup>4</sup> 14,677 acres	17 assessments <sup>4</sup> 117,819 acres	60 assessments 183,500 acres

**Table 2 (continued). Summary of Activities and Accomplishments (Westside)**

RMP RESOURCE ALLOCATION OR MANAGEMENT PRACTICE OR ACTIVITY	FISCAL YEAR 2001 ACCOMPLISHMENTS	CUMULATIVE ACCOMPLISHMENTS <sup>1</sup>	PROJECTED DECADAL PRACTICES
Regeneration harvest (acres offered)	0	39	1,310
Density management (acres offered) regulated/non-regulated	1,003 / 34	6,821 / 96	8,280
Timber sale quantity offered (MM board feet) (regulated/non-regulated)	2,573 / 0.07 MMBF	36.327 / 0.365 MMBF	59.10 MMBF
Timber sale quantity offered (MM cubic feet) (regulated/non-regulated)	0.49 / 0.015 MMCF	7.09 / 0.07 MMCF	10.03 MMCF
Mortality Salvage (acres offered)	0	6,090	0
Understory Reduction (acres)	419	2,342	2,900
Site preparation (acres)	28	344	1,800
Prescribed burning (hazard reduction acres)	0	320	2,000
Prescribed burning (wildlife habitat and forage reduction acres)	0	0	2,500
Natural or artificial ignition prescribed fire for ecosystem enhancement (acres)	0	1,517	up to 40,000
Vegetation control, mechanical/hand (acres)	400	1,612	2,000
Animal damage control (acres)	0	992	4,000
Pre-commercial thinning (acres)	144	590	500
Brush field/hardwood conversion (acres)	0	0	0
Planting/ regular stock (acres)	74	1,276	3,000
Planting/ genetically selected (acres)	0	0	1,000
Fertilization (acres)	0	0	320
Pruning (acres)	0	43	160
Regeneration harvest (acres offered)	0	0	308
Density management (acres offered) regulated/non-regulated	204 / 50	1,337 / 90	2,690
Timber sale quantity offered (MM board feet) (regulated/non-regulated)	0.360 / 0.024 MMBF	3.23 / 0.184 MMBF	4.0 / 0 MMBF
Timber sale quantity offered (MM cubic feet) (regulated/non-regulated)	0.07 / 0.004 MMCF	0.63 / 0.034 MMCF	0.80 MMCF
Mortality Salvage (acres offered)	0	1,020	0
Understory Reduction (acres)	129	129	1,500
Site preparation (acres)	0	35	700
Prescribed burning (hazard reduction acres)	0	0	500

**Table 2 (continued). Summary of Activities and Accomplishments (Westside)**

RMP RESOURCE ALLOCATION OR MANAGEMENT PRACTICE OR ACTIVITY	FISCAL YEAR 2001 ACCOMPLISHMENTS	CUMULATIVE ACCOMPLISHMENTS <sup>1</sup>	PROJECTED DECADAL PRACTICES
Prescribed burning (wildlife habitat and forage reduction acres)	0	1,000	4,900
Natural or artificial ignition prescribed fire for ecosystem enhancement (acres)	1,200	35,724	up to 35,000
Vegetation control, mechanical hand (acres)	0	239	250
Animal damage control (acres)	0	25	150
Pre-commercial thinning (acres)	121	233	200
Brush field/hardwood conversion (acres)	0	0	0
Planting/ regular stock (acres)	23	285	600
Planting/ genetically selected (acres)	0	0	150
Fertilization (acres)	0	0	0
Pruning (acres)	0	0	130
Juniper Thinning/Cutting (acres)	492	1,204	10,000

<sup>1</sup> Timber data is based upon 7 years (October 1, 1994 through Sept. 30, 2001)

<sup>2</sup> Roads closed to the general public, but retained for administrative or legal access.

<sup>3</sup> Many permits/leases are renewed and/or transferred more than once during any ten year period due to base property sales, leases, and other legal vehicles. The KFRA has a total of 96 Allotments and approximately 13,000 AUMs.

<sup>4</sup> Process began in FY99 and is scheduled to continue through FY2008. Figures for 2001 & Cumulative do not include 3,260 acres in the Medford district assessed by the KFRA.

<sup>5</sup> Many noxious weed sites are treated chemically and manually each year in order to control new plants generated from the soil seed bank and/or rhizomes; therefore, FY 2001 sites/acres are the same as cumulative sites/acres.

<sup>6</sup> Biological control treatment (other) are cumulative, as organisms are released in new areas and established organisms disperse.



**Table 3. Summary of Non-Biological Resource or Land Use Management Actions and Accomplishments**

RMP RESOURCE ALLOCATION OR MANAGEMENT PRACTICE	ACTIVITY UNITS	FISCAL YEAR 2001 ACCOMPLISHMENTS	CUMULATIVE ACCOMPLISHMENTS 1995-2001
Realty, land sales	(actions/acres)	0/0	2/1,680
Realty, land exchanges	(actions/acres/acquired- disposed)	0/0	1/120/120
Realty, R&PP leases/patents	(actions/acres)	0/0	0/0
Realty, road rights-of-way acquired for public/agency use	(actions/miles)	0/0	0/0
Realty, road rights-of-way permits or leases granted	(actions/miles)	4/26	35/193
Realty, utility rights-of-way granted (# linear / # area)	(actions/miles/acres)	3/1/1	3/4
Realty, withdrawals completed	(actions/acres)	0/0	1/1
Realty, withdrawals revoked	(actions/acres)	0/0	11/11,281
New permanent road const. (miles/acres <sup>1</sup> )	(miles/acres)	3.3 miles/8.0 acres	5.5 miles/13.4 acres
Roads fully decommissioned/ obliterated (miles/acres <sup>1</sup> )	(miles/acres)	2.7 miles/5.4 acres	5.0 miles/9.9 acres
Roads closed year round (miles <sup>2</sup> )	(roads/miles)	5 roads/1.2 miles	12 roads/3.68 miles
Mineral/energy, total oil and gas leases	(actions/acres)	0/0	0/0
Mineral/energy, total other leases	(actions/acres)	0/0	0/0
Mining plans approved	(actions/acres)	0/0	0/0
Mining claims patented	(actions/acres)	0/0	0/0
Mineral material sites opened	(actions/acres)	0/0	0/0
Mineral material sites closed	(actions/acres)	0/0	0/0
Recreation, maintained off highway vehicle trails	(units/miles)	0/0	0/0
Recreation, maintained hiking trails	(units/miles)	2/1.5 mi.	4/8.5 mi.
Recreation, maintained sites	(sites/acres)	16 sites/2,000 acres	16 sites/2,000 acres
Cultural resource inventories	(sites/acres)	86 sites/13,650 acres	321 sites/46,292 acres
Cultural/historic sites nominated	(sites/acres)	0/0	0/0
Hazardous material sites	(identified/cleaned)	0/0	1/1

<sup>1</sup> Timber data is based upon 7 years (October 1, 1994 through Sept. 30, 2001)<sup>2</sup> Roads closed to the general public, but retained for administrative or legal access.<sup>3</sup> Many permits/leases are renewed and/or transferred more than once during any ten year period due to base property sales, leases, and other legal vehicles. The KFRA has a total of 96 Allotments and approximately 13,000 AUMs.<sup>4</sup> Process began in FY99 and is scheduled to continue through FY2008.

for some resource activities for fiscal year 2001. These accomplishments are compared against cumulative accomplishments for 1995-2001. Further details concerning individual programs on the Klamath Falls Resource Area may be obtained by contacting the Klamath Falls Resource Area Office.

## **Land Allocations within the Klamath Falls Resource Area**

There are approximately 216,000 acres of public land found within the Klamath Falls Resource Area. The Resource Management Plan approved in June of 1995 specified different land management allocations on different portions of the resource area. These allocations direct what activities may occur on each land area. Not all land use allocations and resource programs are discussed individually in a detailed manner in this Annual Program Summary because of the overlap of programs and projects. A detailed discussion of the various land use allocations or resource programs is not given in this Annual Program Summary, but can be found in the Resource Management Plan Record of Decision and supporting Environmental Impact Statement. For a listing of specific projects on the Klamath Falls Resource Area, see the Planning Updates that are published quarterly. These documents are available at the Klamath Falls Resource Area Office.

The Klamath Falls Resource Area is divided into "Westside" and "Eastside" Lands. The Westside lands are further separated into key and non-key watersheds as stipulated in the Northwest Forest Plan.

The acreages of land use allocations found within the Klamath Falls Resource Area and Westside watersheds are displayed in the Figures 3, 4, 5 and 6 below.

## **Aquatic Conservation Strategy Implementation**

The Aquatic Conservation Strategy (ACS) was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems. A set of Aquatic Conservation Strategy objectives was developed in the Northwest Forest Plan, to guide the review and implementation of management activities. The four components of the strategy -- Riparian Reserves, Key Watersheds, Watershed Analysis, and Watershed Restoration -- are designed to work together to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems.

### **Riparian Reserves**

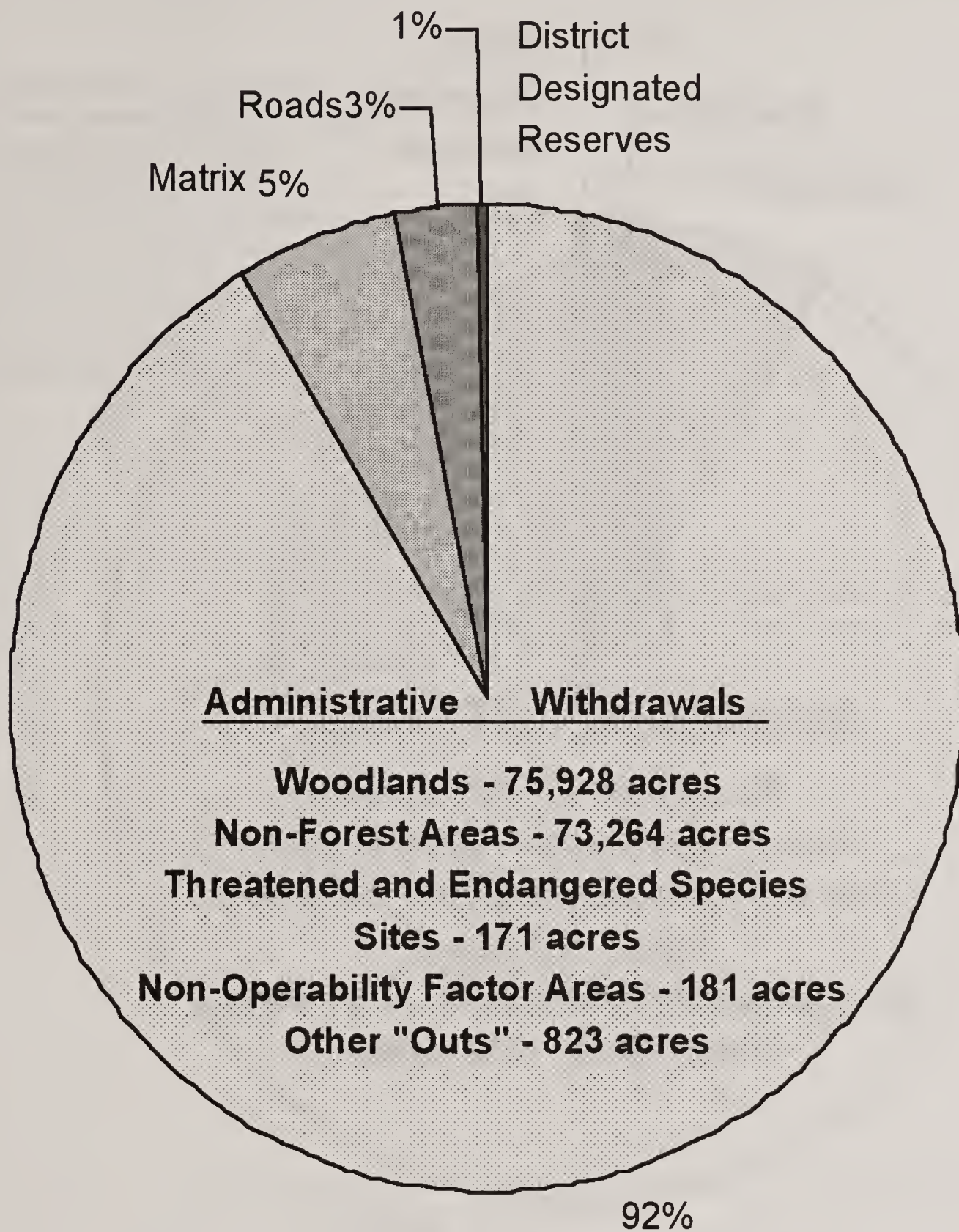
Riparian Reserves are portions of watersheds where riparian-dependent resources receive primary emphasis and where special standards and guidelines from the Northwest Forest Plan (NFP) Record of Decision (ROD) apply. Riparian Reserves are established along the margins of standing or flowing water, intermittent stream channels and ephemeral ponds, and wetlands. In FY 2000, approximately 146 acres of Riparian Reserves were delineated along 3.1 miles perennial and intermittent streams. These reserves were delineated within planned timber sale units.

### **Watershed Analysis and Key Watersheds**

Watershed analysis is required (NFP Record of Decision), prior to implementing activities in Key watersheds. Watershed analyses should also be conducted in other watersheds as a basis



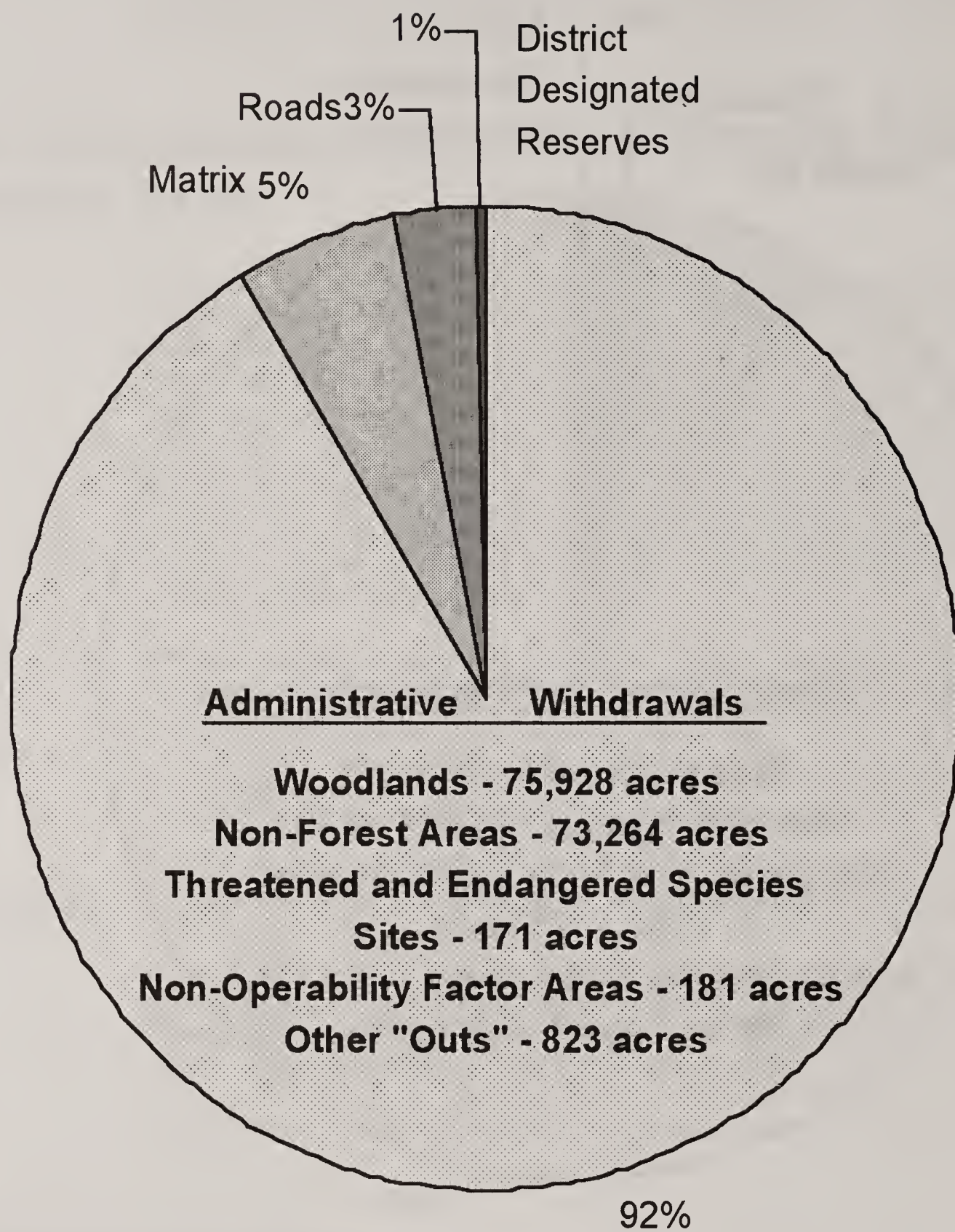
Figure 3. Klamath Falls Resource Area Land Allocations



- Administrative Withdrawals - 150,367 acres
- Matrix - 8,766 acres
- Riparian Reserves - 4,552 acres
- Roads - 642 acres



**Figure 4. Eastside Land Allocations**

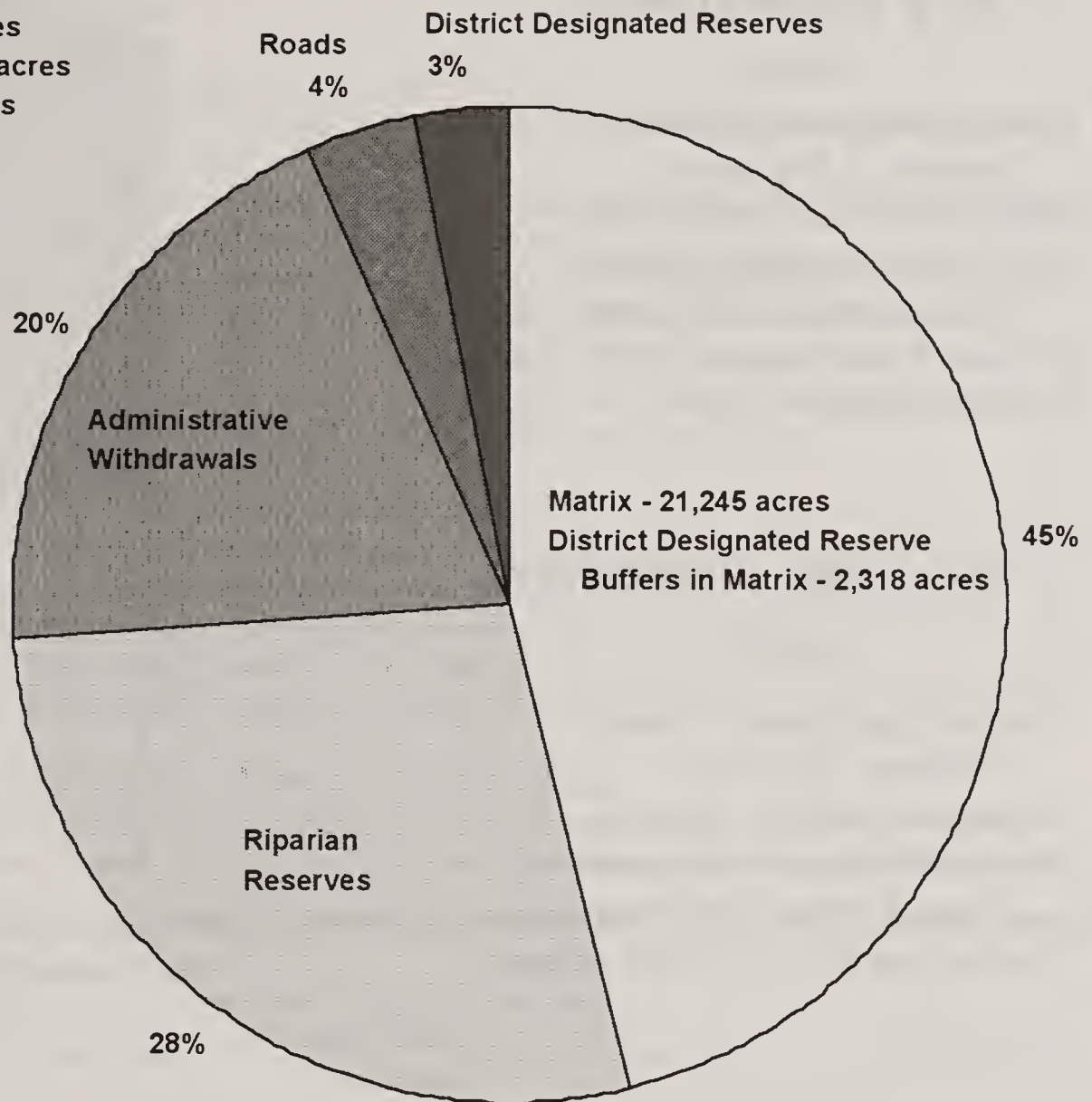


□	<b>Administrative Withdrawals - 150,367 acres</b>
▤	<b>Matrix - 8,766 acres</b>
▥	<b>Riparian Reserves - 4,552 acres</b>
■	<b>Roads - 642 acres</b>

**Figure 5. Westside Land Allocations**

**Administrative Withdrawals Include:**

Klamath River Canyon ACEC - 5,838 acres  
 TPCC Withdrawals - 2,706 acres  
 Old Baldy ACEC/RNA - 519 acres  
 100-Acre Owl Core Areas - 422 acres  
 Surveyor Old Growth - 261 acres  
 Threatened and Endangered  
 Species Sites - 212 acres  
 Tunnel Creek - 74 acres  
 Topsy Campground - 6 acres



- Matrix - 23,563 Acres
- Riparian Reserves - 14,236 Acres
- Administrative Withdrawals - 10,039 Acres
- Roads - 1,834 Acres
- District Designated Reserves - 1,521 Acres

TPCC = Timber Production Capability Classification  
 ACEC = Area of Critical Environmental Concern  
 RNA = Research Natural Area



Figure 6. Westside Matrix Land Watershed Designation

## Key Watersheds

Include:

District Designated Reserve

Buffers - 1,616 acres

Recreation Areas - 245 acres

Visual Resource Management

Class 2 Areas - 666 acres

Klamath River Canyon ACEC - 24 acres

Remaining Matrix - 8,312

## Non-Key Watersheds

Include:

District Designated Reserve

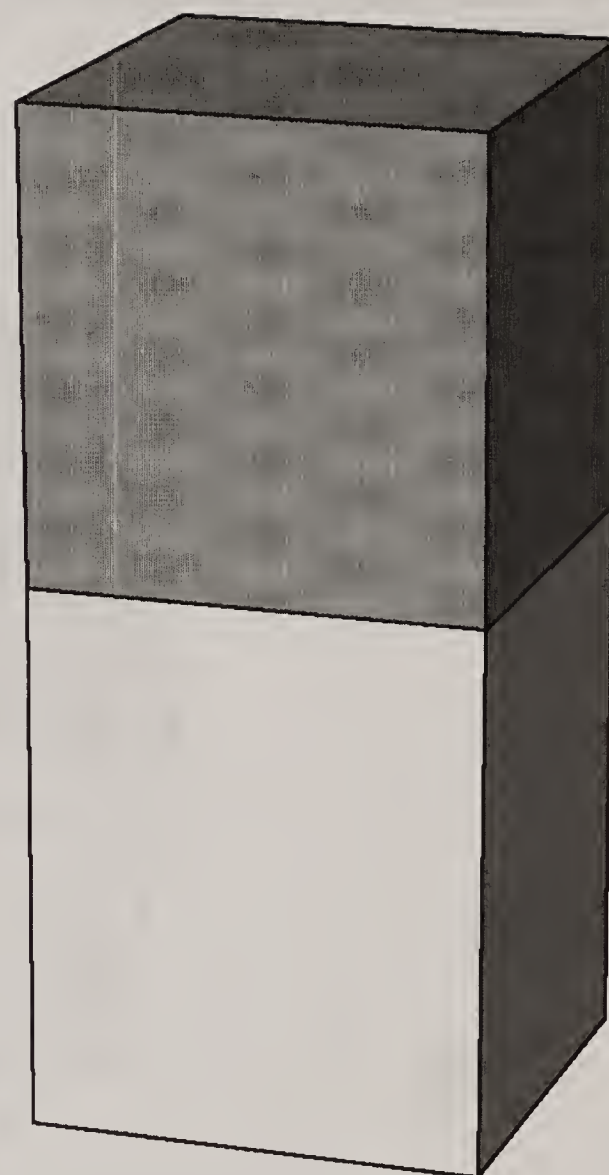
Buffers - 703 acres

Recreation Areas - 46 acres

Visual Resource Management

Class 2 Areas - 591 acres

Remaining Matrix - 11,360 acres



■ Key Watersheds - 10,863 acres

□ Non-Key Watersheds - 12,700 acres

for ecosystem planning and management. The primary purpose is to provide decision makers with an understanding of the ecological structure, functions, processes, and interactions occurring in a watershed along with the wide spectrum of human uses.

This information will be utilized in National Environmental Policy Act (NEPA) documentation for specific projects and to facilitate compliance with the Endangered Species Act (ESA) and Clean Water Act (CWA) by providing additional information for consultation with other agencies.

Watershed analyses include:

- Analysis of at-risk fish species and stocks, their presence, habitat conditions and restoration needs;
- Descriptions of the landscape over time, including the impacts of humans, their role in shaping the landscape, and the effects of fire;
- The distribution and abundance of species and populations throughout the watershed;
- Characterization of the geologic and hydrologic conditions of the watershed.

This information is obtained from a variety of sources, including field inventory and observation, agency records, old maps and photos, and survey records.

The following Table 4 shows the status of watershed analysis for the Klamath Falls Resource Area. To date, watershed analyses have been completed for all lands covered by the NFP. An ongoing watershed analysis covers a block of approximately 112,000 acres in the eastern portion of the resource area, outside of the NFP area. This area is shown in the table as the Gerber/Willow Valley watershed. The remaining lands within the resource area are scattered parcels where resource management issues will be addressed on a case-by-case basis.

### State-listed Clean Water Act 303d Streams

Section 303(d) of the Clean Water Act requires states to submit to the Environmental Protection Agency (EPA) a list of those waters which do not meet water quality standards as a

**Table 4. Watershed Analysis Status**

<b>Watershed Analysis Areas</b>	<b>Completion Date</b>	<b>Number of key watersheds</b>	<b>BLM Acres</b>	<b>Percent of total acres</b>
<b>Jenny Creek* Watershed</b>	February, 1995	1 (Jenny Creek)	12,084 acres	6%
<b>Spencer Creek Watershed</b>	August, 1995	2 (Spencer Creek, Clover Creek)	8,810 acres	4%
<b>Topsy/Pokegama Landscape</b>	July, 1996	0	30,457 acres	14%
<b>Total Completed To Date</b>	NA	NA	51,351 acres	24%
<b>Ongoing FY 2001 Analysis</b>	Gerber/Willow Valley Watershed	0	~112,000 acres	53%
<b>Remaining FY 2001+**</b>	To be determined	0	49,649 acres	23%
<b>Total</b>	NA	3	213,000 acres	100%

\*Completed in conjunction with Medford District

\*\* After Gerber/Willow Valley WA is completed, all main watersheds will have been completed. There will be isolated parcels remaining that will require watershed analysis as time and funding allows.



result of either point, or non-point, sources, and which are in need of a total maximum daily load (TMDL) calculation as an aid in making progress towards solving the segment's water quality problems. Table 5 lists eight state-listed streams, plus Agency Lake, in the KFRA identified as water-quality limited water bodies by the Department of Environmental Quality (DEQ).

## Watershed Restoration

### Roads

Watershed restoration involving road treatments ranges from full decommissioning to simple upgrading. Much of the road restoration work completed to date has been connected with timber sale planning. During the planning and lay out process, roads are identified for repairs, closures, or obliterations. With the large amount of mixed ownership in the forested lands, coordination with private landowners and other land management agencies is crucial to the success of any proposed road projects. Watershed analyses and coordinated planning efforts like the Spencer Creek Coordinated Resource Management Plan (CRMP) provide a framework for road treatment decisions. During FY 2001, 1.36 miles of roads were closed to vehicle traffic through East Grenada and Bull Springs Timber Sales. Also, 2.42 miles of roads were improved across the Resource Area including 1.80 miles of Gerber recreation roads, 0.50 miles of Topsy Road, and 0.12 miles of Klamath River Stateline Road.

### Riparian Habitat Enhancement

Treatments that help maintain large conifers in Riparian Reserves are an important component of watershed restoration. Silvicultural practices have been implemented within riparian reserves to control stocking, re-establish and manage stands, and acquire desired vegetation

**Table 5. State Listed 303(d) Water Bodies in the Klamath Falls Resource Area**

Stream or Water body Name	Basin/Sub Basin	Criteria for Listing
Barnes Valley Creek	Klamath/Lost River	Temperature-Summer
Long Branch Creek	Klamath/Lost River	Temperature-Summer
Miller Creek	Klamath/Lost River	Temperature-Summer
Klamath River	Klamath/Lost River	Temperature-Summer
Clover Creek	Klamath/Upper Klamath	Habitat Modification, Sediment
Johnson Creek	Klamath/Upper Klamath	Temperature-Summer
Miners Creek	Klamath/Upper Klamath	Sediment
Spencer Creek	Klamath/Upper Klamath	Biological Criteria-Benthic Macro-invertebrates, Habitat Modification, Sediment
Agency Lake (the BLM Wood River Wetland flows into Agency Lake)	Klamath/Upper Klamath	Chlorophyll a (Summer), Dissolved Oxygen, pH (Summer)



characteristics needed to attain aquatic conservation strategy objectives. Silvicultural prescriptions are written to maintain uneven aged stands and to maintain and improve the health and resiliency of the shade intolerant species (ponderosa pine, sugar pine, and Douglas fir). Understory reduction prescriptions are used to reduce the density of shade-tolerant species under the tree canopy for the purpose of reducing fire risk and enhancing the health of desired overstory trees. The thinning of densely stocked young stands and the reforestation of shrub-dominated stands with conifers may also be used to enhance riparian habitat.

During FY 2001, work progressed on approximately 25 acres of a planned 80-acre riparian thin along Spencer Creek (in addition to 10 acres completed in FY 2000).

### **Stream Restoration**

Instream restoration projects are necessary when passive restoration will not meet resource goals in the short-term. Such projects are designed to restore instream habitat complexity, and can include bank stabilization, channel realignment, or addition of boulders and woody debris. Potential instream projects are identified during watershed analysis or RMP development. No instream restoration projects occurred in FY 2001. The low-water crossing on Barnes Valley Creek was maintained.

## **Late-Successional Reserves and Assessments**

The Klamath Falls Resource Area does not contain any mapped Late Successional Reserves (LSRs). The closest mapped Late Successional Reserve is to the north on the adjoining Winema National Forest.

The Klamath Falls Resource Area contains fifteen unmapped Late Successional Reserves (UMLSRs), three District Designated Reserves (DDRs), and one Special Area (an Environmental Education Area), all designated for old-growth values. Each reserve is approximately 100 acres in size for a total of approximately 1,900 acres in reserves designated for late-successional values. Unmapped LSRs function as habitat patches that provide connectivity between larger areas of old-growth habitat within mapped LSRs.

A Late Successional Reserve Assessment (LSRA) must be written for management of unmapped LSRs. An LSRA is in preparation that will assess all 19 of the reserves in the resource area. In FY 1997, vascular plant and non-vascular cryptogam (moss, liverworts, lichens, and fungi) inventories were conducted using a combination of cursory and intuitive survey methods to assess the biodiversity of each reserve. The inventory included collection, identification, photographing, and curing of selected specimens. In FY 1997, forest stand conditions in all 19 reserves were sampled using an adaptation of the procedures on the "Forest Survey Handbook, BLM Manual Supplement, Handbook 5250-1". Along with historical descriptions and past harvest data, this information served as a basis for written assessments of stand conditions in each reserve. Editing formatted each of these individual assessments similarly, and management recommendations are being finalized during FY 02. The Late Successional Reserve Assessment will be submitted to the Regional Ecosystem Office (REO) for review and approval.

## **Matrix-Retention of Late Successional Forest Patches, 15% Analysis**

The NFP/ROD (page C-44) and Klamath Falls Resource Area RMP ROD (page 56) require that the BLM and USFS provide for the retention of late-successional/old-growth fragments in the matrix, where little remains. The standards and guidelines are to be applied to any fifth field watershed in which federal forest lands are currently comprised of 15 percent or less late-successional forest, considering all land allocations. In preparing watershed analysis

documents, the Resource Area completed an initial screening of watersheds including lands managed by the BLM-Redding Field Office, BLM-Alturas Field Office, BLM-Medford District Office, Klamath National Forest, Modoc National Forest, Rogue River National Forest, Winema National Forest, and the Fish and Wildlife Service, for compliance with the 15 percent retention standards and guidelines. Results from this analysis were reported in the watershed analysis documents. Klamath Falls Resource Area FY 95 to FY 2001 sales sold under the NFP have complied with the 15 percent rule using the analysis.

A joint BLM/FS Instruction Memorandum was issued on September 14, 1998. This provided the final guidance for implementing the 15 percent standards and guidelines throughout the area covered by the NFP. Implementation of this guidance is required for all actions with decisions beginning October 1, 1999. A final 15 percent analysis was completed in 1999. The Lower Klamath Lake and Butte Creek fifth field watersheds have less than 15 percent late-successional forest (see Table 6). Regeneration harvest in these two watersheds will be deferred until the 15 percent standard is met.

## Fire/Fuels Management

On the Klamath Falls Resource Area in FY 2001 there were 16 wildfires, burning approximately 128 acres (see Table 7). Prescribed fire is used to reduce hazardous fuels accumulations so that wildfires are reduced in size and intensity when they do occur. Another benefit of prescribed fire is to mimic natural wildfire in a mosaic pattern to benefit the total ecosystem (plants, animals, fish, soils, trees, and human uses). The BLM/Klamath Falls Resource Area is one of the leading Federal agencies in the field of prescribed fire and fuels management.

## Air Quality

The air quality program is mostly related to smoke impacts from natural and prescribed fires. The Resource Area has adopted the concept that the prescribed fire program is an integral part of ecosystem management under the RMP. Special care is taken to ensure that all prescribed fire projects are implemented in compliance with the Oregon Smoke Management Plan. Air quality considerations for the prescribed fire program include: burning when good smoke dispersal exists, and prompt mop-up of burned units to reduce residual smoke.

**Table 6. Fifth Field Watersheds with Deferred Regeneration Harvest**

	Federal Forest 80+ Years Old	Harvestable Acres Deferred
Lower Klamath Lake	11.1%	142
Butte Creek	11.3%	607
Total Deferred Regeneration Harvest Acres		749

\* The total 749 deferred acres represent about 3 percent of the Resource Area's Matrix acres. Deferring these acres from harvesting has no significant impact on the sustainable ASQ for the Resource Area.



**Table 7. Fire/Fuels Management**

Prescribed Fire (acres)	Personnel Accepting Assignments to On Resource Area Wildfires	Personnel Accepting Assignments to Off Resource Area Wildfires
<b>FY 1995</b>		
1,813 ac	12	2
<b>FY 1996</b>		
4,120 ac	14	2
<b>FY 1997</b>		
4,818 ac	14	0
<b>FY 1998</b>		
4,432 ac	5	2
<b>FY 1999</b>		
*11,529 ac	2	8
<b>FY 2000</b>		
1,730 ac	32	25
<b>FY 2001</b>		
2,435 ac	34	30

\*Due to prescribed fire contracts being unable to implement burns within prescription, acres are deferred from one year to the next. Thus, the high number of acres in FY 1999, are carryover acres from earlier years.

## Water and Soils

Discharge from 16 springs in the Gerber Block was measured throughout the summer of FY 2001. This was the first year of a multi-year monitoring effort, the primary objective of which is to determine the effect of vegetation treatments on spring discharge. Two of the monitoring sites were selected for vegetation monitoring, which was carried out by KFRA range botanists.

Water temperature monitoring was carried out at 17 sites throughout the resource area.

Fence repairs and maintenance were completed on 13 riparian enclosures and riparian pastures. These fences were established to reduce or eliminate livestock grazing impacts to the riparian areas.

Riparian photo point monitoring was completed at 65 points on 12 streams or wet meadows.

Streambank Stability ratings were completed on stretches of Barnes Valley Creek and Pitchlog Creek at the end of the scheduled livestock season of use. Both creeks had stability ratings of 99% or greater.





Figure 7. Photo Point on Spencer Creek.

In order to quantify levels of soil disturbance resulting from timber harvest, the resource area has been conducting quantitative soil monitoring since 1997. To date, quantitative soil bulk density monitoring and analysis has been completed for three timber sales on the resource area. In FY2001, four projects on the resource area that are expected to have ground disturbing activities were selected for quantitative soil bulk density monitoring. These four projects are: Hamaker Mechanical Slashbuster Fuel Reduction, Short Lake Mountain Mechanical Juniper/Fuel reduction, Kilgore Mechanical Juniper/Fuel reduction, and the Muddy Tom Timber Sale mechanical harvest. An additional project, East Grenada Timber Sale mechanical harvest was monitored for areal extent of soil disturbance.

A statistically significant number of pre treatment baseline soil samples were collected and processed for four of the projects. When these projects are complete, post treatment soil bulk density samples will be collected, processed, and compared to the pre treatment samples to determine if soil resources are being detrimentally impacted.

## **RMP Best Management Practices**

Best Management Practices are identified and required by the Clean Water Act as amended by the Water Quality Act of 1987. Best Management Practices are defined as methods, measures, or practices to protect water quality or soil properties. Best Management Practices are selected during the NEPA interdisciplinary process on a site specific basis to meet overall ecosystem management goals. The Klamath Falls Resource Area Record of Decision and Resource Management Plan lists Best Management Practices for various projects or activities



that may be considered during the design of a project. Monitoring of the RMP during FY 2001 has shown that Best Management Practices have been appropriately implemented with a high degree of success.

## **Wildlife Habitat**

### **Big Game Habitat**

Cooperative road closures continue to be maintained for elk and other big game management both on the Eastside and the Westside of the Resource Area. Gates and other closures continue to be maintained. Additional road closures are planned in future years to reduce open road density closer to 1.5 miles per section.

Thermal clumps were designed into the timber sales during the layout phase to provide extra escape and thermal cover within the timber harvest units. This is especially important in the winter range areas.

### **Elk and Mule-deer Habitat**

Habitat improvement for big game was coordinated with the fuels reduction programs. Biologists prioritized selected fuels units and helped set objectives where the treatments could enhance big game habitat. Several winter range areas were targeted (Lorella, Harpold area, Swan lake rim, etc).

In addition, meadow areas with invasive juniper were treated. This improved the meadow habitat for big game and landbirds.

## **Nest Sites, Activity Centers, and Rookeries**

### **Bald Eagle**

See discussion under Threatened and Endangered Species.

### **Golden Eagle**

Six historic nest territories were monitored this year. Three of these sites were occupied and produced young this year. Seasonal restrictions and distance buffers are applied to proposed activities in the vicinity of golden eagle nest sites.

### **Osprey**

Historic nest sites were checked for occupancy and nesting. Of the 11 nest locations checked, nine sites were active with osprey incubating, while one nest site was occupied by a Canada goose. The remaining site was unoccupied. An additional three new osprey nests were found this year.

## **Neo-tropical Migratory Birds**

### **Migratory Bird Day**

Baseline surveys and monitoring for Neotropical migratory birds is a requirement under the Upper Klamath Basin and Wood River RMP/EIS. Other sampling on the resource area is being conducted to collect baseline data on presence/absence and trends of bird species in grazing allotments, within habitats where there are management concerns or threats, or for projects such as the relicensing of the hydropower operations on the Klamath River.

Other umbrella documents that recommend Neotropical migratory bird surveys within certain priority habitats are published by Partners in Flight, and include "Management, Research and Monitoring Priorities for the Conservation of Neotropical Migratory Landbirds that Breed in Oregon", and "Birds in a Sagebrush Sea: Managing Sagebrush Habitats for Bird Communities".

1. Continued the project work under cooperative agreement with the Klamath Bird Observatory and the Pacific Southwest Research Station of the U.S. Forest Service. Partners in this project included the World Wildlife Fund, Winema National Forest, Klamath Basin National Wildlife Refuge, and Point Reyes Bird Observatory. Demographic stations are set up in riparian areas in the Klamath River Canyon within the boundaries of the J.C. Boyle Hydro power Project, in grazing allotments, and other areas of concern, including portions of the Wood River Wetland. This data will also be used for BLM's evaluation of the FERC relicensing of power projects on the Klamath River and grazing allotments. Data from this study is in the analysis phase.
2. In cooperation with the Klamath Bird Observatory, BLM continued its landbird study in habitats including sagebrush, juniper/sage, old growth juniper, and juniper/ponderosa pine. The objectives of the study are to evaluate the condition and trends within these habitat types and to help evaluate management actions related to juniper harvest treatments. A total of 57 point count stations were placed in a variety of shrub habitats, 21 in dense juniper, and 18 in juniper/pine woodland (Total 96). In addition, general information on plant species composition was gathered using the releve' method at 14 out of 15 of the sampling sites. Bird surveys were conducted at these stations from 1999 through 2001.
3. In 2001, additional landbird surveys were conducted in Fuel Treatment Zone Units prior to management. The majority of the units sampled for birds were in juniper and juniper/shrub habitats.

Within the FTZ Units, a total of 118 stations were sampled during the summer of 2001 prior to treatment. A minimum of 12 stations were set up in each unit. The FTZ Units surveyed, the number of stations per FTZ Unit, general habitat type and the survey year are included in Table 3. General information on plant composition was also collected in a few of these units using the releve' method.

## **Threatened/Endangered Species**

### **Northern Spotted Owl**

The Klamath Falls Resource Area currently contains 21,260 acres of suitable spotted owl habitat. Of this, 6,676 acres are reserved or maintained as owl habitat. The reserves include 100-acre core areas near nesting owls plus other district-designated reserves. Riparian areas and preferred habitat areas are also managed to maintain owl habitat.

The Bureau of Land Management works cooperatively with U.S. Timberlands in monitoring five of the fourteen sites. BLM also worked with Boise Cascade to monitor the Chicken hills site because of private logging activity in the area.

Of the fourteen sites monitored, ten were occupied with spotted owl pairs. No birds were detected at three other sites (County Line, East Miners Creek, and Hornbill) and their status is considered unknown (Table 8).

A temporary site number (MSNO 9502 T) was assigned to the Chicken Hills site in 2000. Both a male and female spotted owl were found at the site in 2001. The pair was first located on 4/17/01. The pair did not nest this season.



Of the 21 individual adult/subadult birds detected, band confirmations were made for 16 birds. Of the 16 birds confirmed as banded, 14 were birds, which had previously occupied the current activity center and had been banded there with the target color.

At one owl site, spotted owls replaced birds, which had previously occupied those locations. Turnover was documented at the Buck Mountain site. A subadult female, previously unbanded, was captured and banded at the Buck Mountain site. An adult male, previously banded at the Goosenest RD on the Klamath National Forest, was captured at the Buck Mountain site (MSNO 1306).

Annual monitoring is conducted to determine owl nesting activity and is displayed in Table 8.

### **Bald Eagle (Threatened)**

Fifteen bald eagle nest territories and four winter roost areas are known to occur on BLM lands within the Klamath Falls resource area. In 2001, fourteen of the fifteen nest territories were occupied with at least one adult eagle, including one new nest territory. Of the occupied territories, eight were successful in fledging young. Nest sites were monitored cooperatively with Oregon Cooperative Fish & Wildlife Research Unit, Oregon State University and U.S. Timberlands.

Fuels reduction treatments were performed on approximately 12 acres under and adjacent to one bald eagle nest in FY2001. Treatments included removing understory vegetation (brush and small trees) from 2 acres directly under the nest tree and additionally treating the vegetation under the larger trees (>20") in the remaining 10 acres. This fuels reduction treatment is in preparation for future prescribed fire activities and nest stand protection in the event of a wildland fire.

Mid-winter surveys for bald eagles were again conducted this year. The counts are conducted annually in the month of January to monitor trends of wintering populations of bald eagles.

### **Peregrine Falcon (Bureau Sensitive)**

The peregrine falcon was de-listed from the Endangered Species Act in 1999. A peregrine falcon specialist was contracted to analyze potential peregrine falcon habitat for the Lakeview District. The KFRA has four areas rated as high for nesting potential. All four sites were

**Table 8. Northern Spotted Owl Monitoring Activity by Fiscal Year**

Survey Year	Sites Surveyed <sup>1</sup>	No. Birds Observed <sup>2</sup>	Proportion of Sites Occupied
1996	17	13	82%
1997	13	6	69%
1998	13	9	69%
1999	13	9	69%
2000	13	21	77%
2001	14	21	79%

<sup>1</sup> Sites that had one or more visits. May include some sites that did not receive four visits.

<sup>2</sup> Includes singles or pairs.\

surveyed in FY 2001. Future surveys and monitoring will continue at these sites to help ascertain the presence/absence of peregrine falcons within the resource area.

### **Yellow Rails (Sensitive Species)**

BLM policy directs that our actions should avoid contributing to the need to list these species as threatened or endangered. The yellow rail was thought to be extirpated from the western U.S., until it was rediscovered in the Wood River Valley in 1982. The BLM's Fourmile Creek wetland harbors one of the largest breeding populations in Oregon. For the past six years, the resource area has participated in a cooperative agreement between The Nature Conservancy, Winema National Forest, and the Oregon Department of Fish and Wildlife to conduct a study of breeding yellow rails on the Fourmile area and Wood River Wetland. All areas were surveyed in FY 2001. In general, production appeared to be less than in past years.

### **Townsend's Big Eared Bat (Sensitive Species)**

Under the RMP, the resource area is to minimize human disturbance to the maternity colony of these bats at Salt Caves on the Klamath River. A seasonal closure is in place from May 1 through September 15 at this site. In FY 2001, a Draft Cave Management Plan EA was prepared, which includes recommendations for long-term adaptive management and monitoring. The final Cave Management Plan will be included as an amendment to the Klamath River Management Plan.

### **Oregon Spotted Frog (Candidate Species)**

The Oregon spotted frog is known to exist at three locations (Tunnel Creek, Wood River Wetland, and Fourmile Creek) within the KFRA. The majority of the Wood River Wetland area was surveyed in mid-March for egg masses to determine if the spotted frog may have established new territories due to the expansion of potential habitat within the interior of the wetland. Oregon spotted frogs were found in past habitat locations, but fewer egg masses were noted than in 2000.

## **Special Status Species/Habitat, Wildlife**

### **Survey and Manage/Protection Buffer Species**

#### **Mollusks**

##### **Terrestrial**

Under the existing standards and guides during fall 2000, four Survey and Manage (S&M) terrestrial mollusk species *Prophysaon dubium* (tail dropper), *Prophysaon coeruleum* (blue-gray tail dropper), *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband) had potential to occur within the resource area. Pre-disturbance surveys for terrestrial mollusks were conducted on 2,520 acres of public land in the fall of 2000. A total of 132 sites of *P. coeruleum* were identified. No other Survey and Manage terrestrial mollusks were found. Only two species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband), which potentially occur in the resource area require pre-disturbance surveys under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2001, surveys according to protocols of potential habitat were conducted in five timber sale areas (Grenada West, Slim Chicken, Saddled Again, Surveyor, and Buck Again), which totaled approximately 1,070 acres. Specimens were collected of mollusks that are potentially S&M species, and these specimens have been sent to a regional taxonomic expert for species determination.



Pre-disturbance surveys of suitable habitat for S&M terrestrial mollusks will continue for all potential ground disturbing activities.

#### **Aquatic**

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. Pre-disturbance surveys for aquatic mollusks were conducted on approximately one mile of Miner's Creek. Several specimens of *Fluminicola* sp. were collected and sent to a regional taxonomic expert for species determination. In conjunction with herpetological surveys, additional surveys for aquatic mollusks were conducted in spring areas of the Klamath Canyon. Eighteen sites were surveyed which totaled approximately 65 acres. Specimens were collected of mollusks that are potentially S&M species, and these specimens have been sent to a regional taxonomic expert for species determination. Pre-disturbance surveys for S&M aquatic mollusks will continue for all potential ground disturbing activities that may impact aquatic mollusks. Current management recommendations for aquatic mollusk species (Management Recommendations for Survey and Manage Aquatic Mollusks Version 2.0) will be administered.

## **Other Species of Concern**

This category includes other species that have received special tracking emphasis on the Resource Area.

### **Accipiters**

#### **Northern Goshawk**

Known goshawk nests are monitored for occupancy, nesting, and reproductive success. Five historic northern goshawk nest sites were monitored. Two of these nest sites produced young.

#### **Great Gray Owl**

The great gray owl is listed as a protection buffer species in the Northwest Forest Plan Record of Decision. The Great Gray owl is not a Bureau sensitive species, but is a species that is tracked to obtain more information as to its status. Since 1996, the KFRA has conducted surveys to protocol in areas where ground-disturbing events are planned. Great gray owls have been detected in nine different areas in the resource area.

In FY 2001, nineteen different locations were surveyed for great gray owl activity. There are five known territories with one of them being occupied by a pair of owls. The remaining territories are classified as territorial single birds. The great gray owl territories are concentrated in the Johnson Creek drainage and the Hayden Creek drainage. One territory is near Burton Butte. Great gray owl responses have been heard in four other locations, but these have not yet been confirmed as occupied territories.

#### **Forest Carnivores**

Surveys for marten (*Martes americana*), fisher (*Martes pennanti*), wolverine (*Gulo gulo*), and lynx (*Lynx canadensis*) were conducted again in 2001. Twelve photographic bait stations were placed in areas that had the highest likelihood of these species presence. The Klamath River Canyon and adjacent areas were the primary focus for this year. No marten, fisher, wolverine, or lynx were found, but five bobcat, three mountain lion, and two gray fox locations were detected.

#### **Herptiles**

During the FY 2001 field season the second year of a Herpetological Inventory of the Upper Klamath River Canyon was conducted. The survey area encompassed 16 miles on both sides of the Upper Klamath River Canyon. The surveys include both aspects of the canyon, from the river, up slope to the rim. Main drainages into the Upper Klamath River were also included. The elevation in the study area ranged from 2,790 to 4,420 feet. A wide variety of



reptiles and amphibians were found in and around the study area. A diversity in habitats like talus and rocky hillsides provide good habitat for lizards and den sites for snakes, while amphibians inhabit moist sites around seeps, springs and along the river. A total of 27 species may potentially occur within the study area.

The Sharptail Snake –(*Contia tenuis* - State sensitive) a new species identified in this year's surveys was located in the drift fence traps. This sensitive species forages on slugs.

Sixteen of these species were detected in the study area during the first season of this

### **Sage Grouse**

This species is ranked as a BLM species of special concern and is being considered for listing under the Endangered Species Act. KFRA continued monitoring historic lek sites in FY 2001. No birds were seen using the lek sites. Potential habitat improvement projects around these historic lek sites were designed and some were completed during 2001. Even though no birds were seen at one lek site during the mating season, tracks of up to four birds were seen in the area after the juniper removal project was completed.

## **Fish Habitat**

During Fiscal Year (FY) 2001, the Resource Area employed two fisheries biologists. The biologists conducted extensive planning and consultation on multiple projects in the Resource Area including but not limited to the Klamath River Management Plan (EIS), Wood River Restoration Project (see Wood River section), Barnes Valley low water ford, Rock Creek Bridge Replacement, Pitchlog Bridge Deck Replacement, Miners Creek Road Treatments, and Spencer Creek Channel Treatments. A rotary screw trap, serber samplers, ocular verification, Wolman pebble counts and cross-section channel profiles were utilized to the monitor fisheries resources for FY 2001.

## **Threatened/Endangered Species**

### **Lost River and Shortnose Suckers**

Lost River suckers (*Deltistes luxatus*) and Shortnose suckers (*Chasmistes brevirostris*) occupy lakes as adults and spawn in streams during the spring and early summer. Both species spawn in the Wood River and are thought to spawn in the Wild & Scenic section of the Klamath River in the resource area. The Wood River and Four Mile Creek are designated as critical habitat for both species even though suckers are not currently found in Four Mile Creek. Four Mile Creek is historic habitat and the BLM portion of the stream is in properly functioning condition. Fish cannot enter the stream because of downstream barriers. The tributaries to Gerber Reservoir are critical habitat and contain shortnose suckers. Miller Creek is critical habitat for both sucker species and may contain populations of both species.

Monitoring of fish populations in the Wood River occurred through the spring of FY 2001 using a rotary screw trap to capture and record redband trout and juvenile sucker movements, and other aquatic organisms. This monitoring was a cooperative effort between the BLM and Oregon Department of Fish and Wildlife district staff for monitoring potential affects to fishery resources caused by the restoration of the Wood River channel. The channel realignment actions have largely been completed in the mainstem of Wood River. Trapping objectives (Do instream work periods coincide with the presence of native redband and suckers?) were tentatively met upon completion of the instream work. Concerns were raised by BLM and ODFW staff on the effectiveness of the trapping effort for meeting additional monitoring objectives (How many fish may be affected by instream work?). In consultation with ODFW, the BLM has halted trapping operations at the site, as additional trapping was not anticipated to contribute to meeting the additional monitoring objectives. The BLM is working with ODFW, Tribal Biologists, and other resource management organizations to

coordinate a fishery monitoring program in Upper Agency Lake that would meet fisheries monitoring objectives.

Tributaries to Gerber Reservoir were surveyed for spawning shortnose suckers at least four times from March through June in 2001. The tributaries checked were Pitchlog Creek, Barnes Valley Creek, Long Branch Creek, Miller Creek, and Ben Hall Creek. There were two sample locations in Barnes Valley Creek; upper and lower Barnes Valley Creek. The surveys included visually identifying spawning adults, serber sampling for eggs, and visual and serber sampling for larvae. Successful spawning, presence of eggs or larvae, was documented only in Barnes Valley Creek (upper and lower) in 2001.

## **Bull Trout**

The Resource Area administers one area where bull trout (*Salvelinus confluentus*) presence is suspected -- Demming Creek Ditch and Cambell Reservoir. The Resource Area administers additional potential critical habitat in Fourmile Creek, and Wood River, however, bull trout do not currently occupy these areas. No surveys for bull trout were conducted by Field Office staff in FY 2001.

## **Aquatic Habitat Restoration**

Additional work was conducted at the Barnes Valley low water crossing in FY 2001. The project is designed to improve fish passage in Barnes Valley at the ford and improve fluvial process above and below the crossing. The project should help endangered shortnose suckers, as well as redband trout, to pass the ford at lower flows. Construction of rock weirs upstream and downstream of the crossing were installed in 2001 in order to alter riffle to pool sequencing. It was intended that the upstream structure change the pool location within the stream and the weir downstream would act as a sediment deposition location for vehicular use.

Road activities to improve water quality continue to be a focus of the resource area where possible. In FY 2001, a road sedimentation study was completed in the Spencer Creek watershed (see Water and Soils Monitoring section). This study is expected to identify key road features (physical and geographical) that should be targeted for improvement, and improve road management to reduce future sediment runoff.

Extensive project planning for restoration of Spencer Creek was conducted in 2001. Over six miles of Spencer Creek was reviewed, from the mouth of Miners Creek to the base of Buck Lake, in order to assess the current channel condition. Seventy cross-sectional profiles and pebble counts were collected. The channel cross-sections will aid in developing specific channel treatments. Proposed instream actions may include rock weirs, log structures, bankfull bench treatments, and riparian vegetation enhancement.

## **Endangered Species Act (ESA) Section 7 Consultation**

Consultation is being continued on individual projects that have the potential to affect endangered suckers. The Resource Area contains critical habitat for both species of suckers. Critical habitat administered by the BLM for the listed sucker species is predominantly on the Eastside of the resource area. There is limited critical habitat administered by the BLM for endangered sucker species on the Westside of the resource area, mostly the mainstem of the Klamath River.

## **Klamath Wild and Scenic River Plan/Hydroelectric Relicensing**

Resource Area staff continued consultation with multiple state, federal, and tribal agencies for the Upper Klamath River Wild and Scenic River Management Plan Environmental Impact



Statement (EIS). The Klamath River Plan EIS will amend the Klamath Falls Resource Area Record of Decision and Resource Management Plan (1995). The federally listed Lost River sucker, shortnose sucker, and coho salmon may be affected by the proposed plan amendment; therefore, informal consultation with the USFWS and National Marine Fisheries Service (NMFS) is currently ongoing.

Resource Area staff have coordinated with state, federal, and tribal agencies on the proposed relicensing of the PacifiCorp Klamath River Project (FERC License 2082). Listed species within the project area (Lost River and shortnose suckers) as well as listed species below the project (coho salmon) are potentially affected by this project. Resource Area staff are consulting with the USFWS and the NMFS on project impacts affecting BLM administered lands.

## Special Status and SEIS Special Attention Species, Botany

### Survey and Manage Species and Protection Buffer Species

Surveys for special status and special attention species are being conducted prior to ground disturbing activities. Fall 2000 Survey and Manage (S&M) fungi surveys were conducted to the then existing protocols ("Survey Protocols for Seven Protection Buffer Fungi Version 1.3") in three proposed timber sale areas (Slim Chicken, Surveyor and Saddled Again) which total approximately 2,520 acres. Under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001), pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species. Klamath Falls Resource Area has no potential habitat for any S&M lichen or bryophyte species, which require pre-disturbance surveys; therefore no lichen or bryophyte surveys were conducted (see Tables 9 and 10).

Strategic surveys for Survey and Manage species at three Current Vegetation Survey (CVS) plots were conducted according to protocols. Spring surveys for fungi and surveys for lichens, bryophytes and vascular plants were completed.

**Table 9. Total Number of Sites by Taxa Group for Special Attention Plant Species (09/30/01)**

Taxa Group	Category	Category	Category	Category	Category	Category
	A	B	C	D	E	F
Fungi	0	606	0	2	0	922
Lichens	0	0	0	0	0	0
Bryophytes	0	0	0	0	0	0
Vascular Plants	0	0	4	0	0	0
Totals	0	606	4	2	0	922



**Table 10. Total Number of Species by Taxa Group for Special Attention Plant Species (09/30/01)**

Taxa Group	Category A	Category B	Category C	Category D	Category E	Category F
Fungi	0	16	0	1	0	3
Lichens	0	0	0	0	0	0
Bryophytes	0	0	0	0	0	0
Vascular Plants	0	0	1	0	0	0
Totals	0	16	1	1	0	3

There are 346 species listed in the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001) as survey and manage species. Pre-disturbance surveys are required for only one plant species under the 2001 Record of Decision, a vascular plant species. Survey protocols have been developed for S&M vascular plants, and surveys have been conducted in conjunction with surveys for other special status plant species in area proposed for ground disturbing activities.

Management Recommendations have been developed for S&M vascular plants, and some species of fungi, bryophytes, and lichens. Special status and special attention species sites on the Klamath Falls Resource Area are documented and are managed according to management recommendations for the particular species.

Klamath Falls Resource Area participates in entering S&M data into the Interagency Species Management System (ISMS). In addition, data are maintained in an electronic spreadsheet containing all known special attention species sites. Many of the staff involved with survey and manage or protection buffer species have been trained in implementing survey protocols, species identification, and data entry.

## Special Status Species

Approximately 20,920 acres of systematic inventory for botanical resources was conducted on the resource area. Two populations of profuse-flowered mesa mint (*Pogogyne floribunda*), an Oregon Natural Heritage Program List 1 and Bureau Sensitive species new for the resource area, were found. Two new populations of fringed campion (*Silene nuda* ssp. *insectivora*-Bureau tracking) were also found (Table 11).

The resource area participated in a Challenge Cost Share for the review of the genus *Carex* in the Lakeview District. *Carex* specimens from the resource area herbarium were sent to the *Carex* Working Group, and a field visit to several sites on the resource area by several members of the working group resulted in documentation of a new special status species for the resource area. *Carex lepalea*, an ONHP List 3 and Bureau Tracking species was sighted in the Tunnel Creek Special Botanical Area (Table 11).

**Table 11. Total Number of Sites by Taxa Group for Special Status Plant Species (09/30/01)**

<b>Taxa Group</b>	<b>Federal Listed</b>	<b>Federal Candidate</b>	<b>Bureau Sensitive</b>	<b>Assessment Species</b>	<b>Tracking Species</b>
Fungi (1 species)	0	0	0	0	37
Lichens (1 species)	0	0	0	0	2
Bryophytes (0 species)	0	0	0	0	0
Vascular Plants (7 species)	0	0	130	0	72

## Special Areas

The Klamath Falls Resource Area has five Areas of Critical Environmental Concern (ACEC) and Research Natural Areas (RNA) totaling approximately 12,140 acres; three Special Botanical/Habitat Areas totaling 570 acres; and two Environmental Education Areas totaling 180 acres. One additional area has been proposed as an ACEC, which is 1,196 acres in size. Table 12 lists all Special Areas in the resource area. Only those special areas that received some specific management activities in FY 2001 are discussed below.

### Klamath Canyon ACEC

Management of the Klamath Canyon ACEC will be addressed in the management plan for Wild and Scenic river values within the State of Oregon Wild and Scenic River/State Scenic Waterway plans. The plan and EIS will also evaluate the addition of 947 acres of land managed by KFRA and 463 acres of private land in Oregon, and 1,472 acres of land managed by the BLM's Redding Field Office, 600 acres managed by the USFS Klamath National Forest, and 8,607 acres of private land in California to the ACEC. The planning effort was initiated by the BLM in FY 2000 and will be completed in FY 2003.

### Old Baldy Research Natural Area

A prescribed fire originally planned for FY 2000 in the Frosty Too timber sale will be implemented in 2002. The fire will be allowed to burn into the Old Baldy RNA/ACEC. The Old Baldy RNA was designated for the shrub community, dominated by snow brush and manzanita. Up to 400 acres will be burned within the RNA depending upon weather and vegetation conditions. Prescribed fire effects monitoring plots were established in 1999 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program (ONHP). Data from a sub-sample of the plots were collected in 2001 to verify the validity of that pre-burn data. The prescribed fire is being implemented by contract for the Klamath Falls Resource Area. Table 12. Special Areas

### Wood River Wetland ACEC

Activities occurring on the 3,200 acre Wood River Wetland located in the Klamath Falls Resource Area are guided by a separate management plan entitled Upper Klamath Basin and Wood River Wetland RMP/EIS, completed in July of 1995. Restoration work at the wetland is coordinated with several partners, including the Klamath Tribes.



**Table 12. Special Areas**

<b>Areas of Critical Environmental Concern</b>	<b>Acres</b>
Klamath Canyon ACEC	5,700 acres
Wood River Wetland ACEC	3,200 acres
Miller Canyon ACEC	2,000 acres
Yainax Butte ACEC	720 acres
Old Baldy Research Natural Area	520 acres
Fourmile Creek ACEC (Proposed)	1,196 acres
<b>Special Botanical/Habitat Areas</b>	<b>Acres</b>
Tunnel Creek Special Botanical Area	280 acres
Bumpheads Special Botanical Area	50 acres
Alkali Lake Special Habitat Area	240 acres
<b>Environmental Education Areas</b>	<b>Acres</b>
Clover Creek Environmental Education Area	30 acres
Surveyor Forest Area Environmental Education Area	150 acres

A monitoring report, specific to the Wood River Wetland, is prepared annually and distributed in March. Copies of this report are also available on request.

### **FY 2001 Wood River Accomplishments**

#### **Planning**

- Completed and distributed the 2000 Monitoring Report; also collected 2001 data, as appropriate.
- Completed Re-initiation of Consultation with U.S. Fish and Wildlife Service.
- Completed Plan Conformance adjustment for the delta channel restoration of the Wood River
- Applied for permits from Oregon Division of State lands and the U.S. Army Corps of Engineers for delta channel restoration work on the Wood River, downstream of the Dike Road Bridge.

#### **Funding**

- Oregon Trout brings approximately \$180,000 (75 acres, 0.7 miles) to the river channel restoration portion of the project (through grants from U.S. Fish and Wildlife Service Ecosystem Restoration Office).
- Klamath Tribes monitored water quality and contributed to cultural resource survey (\$12,000).

#### **Tours/Presentations**

- Sixth graders (Shasta and Peterson elementary schools)
- School staff of Chiloquin elementary schools
- Henley and Lost River high schools
- OIT (Oregon Institute of Technology) applied environmental sciences class



- Expanding Horizons Program
- Henley High School Science Staff
- Roosevelt Elementary School Third Grade Wetland Discovery Day
- California Joint Venture Tour
- Klamath Leadership 2001 Tour
- OIT Civil Engineering Student Tour

#### Project Implementation

- Completed cultural resource surveys for planned construction areas.
- Completed sixth year of monitoring.
- Installed two hunter access crossings.

#### FY 2002 Planned Projects

- Install fish screen on Seven Mile canal diversion structure.
- Surface rock dike roads from the bridge to Seven mile Canal.
- Install floating boardwalk, interpretive signs, restroom, trail system and group interpretive site.
- Remove sheet piling from river channel constructed in 1998.
- Completed the restoration of the Wood River channel between Dike Road Bridge and Agency Lake

### **Special Botanical/Habitat Areas**

The Tunnel Creek Special Botanical Area was a sedge inventory site for the Carex Working Group under a Challenge Cost Share agreement. The high diversity of plant communities and species was noted. A special status species (Carex leptalea – ONHP List 3 and a Bureau Tracking species) was found, which is new species record for Klamath County.

### **Environmental Education Areas**

The Klamath Falls Resource Area contains two Environmental Education Areas that total approximately 180 acres. Interpretive education uses at the Clover Creek and Surveyor Forest Environmental Education Areas receive substantial numbers of local visitors each year.

## **Wild and Scenic Rivers**

The upper Klamath River is designated as a Scenic River in the Wild and Scenic river system. The designated river in the Resource Area, is an 11-mile segment, extending from just below the J.C. Boyle powerhouse to the Oregon-California state line (see Figure 9). This same portion of the river is designated an area of critical environmental concern (see earlier discussion). Wild and Scenic rivers are to be managed to protect their outstandingly remarkable values (ORVs) and to maintain and enhance the natural integrity of river related values. All proposed management actions, or commercial activities, in the Wild and Scenic river corridor, are evaluated by Resource Area specialists to ensure that the ORVs are not degraded. If there are impacts associated with a project, adequate mitigation must be included to maintain or enhance resource values.

The upper Klamath River is quite popular for summer recreation, particularly whitewater rafting, camping, and fishing. In FY 2001 approximately 4,000 people floated the upper Klamath in rafts and kayaks, the majority of them traveled with one of the 20 commercial guides and outfitters permitted by the BLM. BLM recreation staff provided visitor assistance at the Spring Island launch site on every weekend from mid June through mid September. River rangers conducted approximately 13 river patrols by raft to provide visitor assistance, monitor resource conditions, and maintain remote recreation sites along the river.

BLM recreation staff meets periodically with upper Klamath River outfitters and guides, and staff members of the utility company that operates the hydroelectric plants above and below



the designated Wild & Scenic segment. In FY 2001, a post-season meeting was held in November to review how the season went for the outfitters and to discuss the proposed river management plan. Additional meetings were held in January and April to coordinate management activities, especially discussions regarding the timing, volume, and duration of water releases during the peak rafting season.

The Resource Area conducted a small oak-woodland thinning project designed to enhance wildlife habitat in FY 2001. No prescribed burns were implemented in FY 2001, however, a prescribed burn is proposed in FY 2001 on the parcels of oak-woodland thinning within the river corridor.

A river management plan/Environmental Impact Statement effort was initiated in FY 2000, and development of the plan continued in FY 2001 for the Klamath River in Southern Oregon and Northern California. The plan will address options for managing the outstandingly remarkable values and the ACEC values and is scheduled for completion in FY 2003.

## Cultural Resources

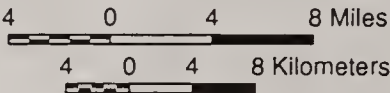
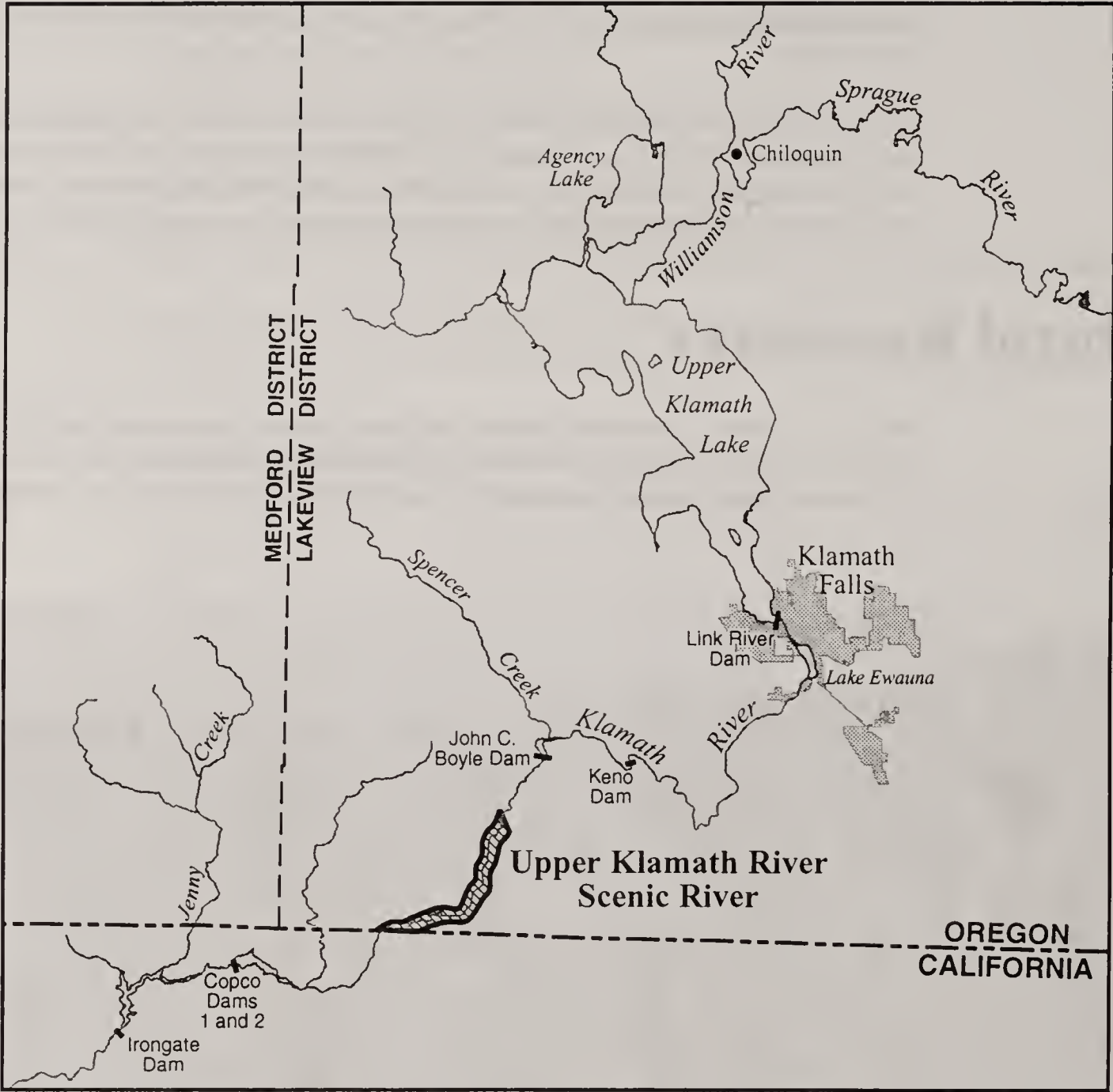
The cultural resource program identifies and manages cultural resources on BLM administered lands. This program ensures that the BLM complies with federal and state law governing cultural resources preservation and works with the State Historic Preservation



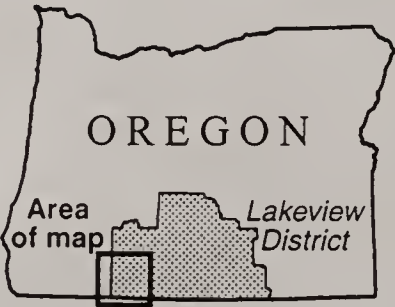
Figure 8. Upper Klamath River Management Plan-Analysis in Process.

U.S. DEPARTMENT OF THE INTERIOR  
Bureau of Land Management  
Lakeview District  
Klamath Falls Resource Area

FIGURE 9 - UPPER KLAMATH RIVER SCENIC RIVER MAP  
2001



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**Table 13. Cultural Resource Inventory by Fiscal Year**

Year of Survey	Acres (BLM Class III)	Number of New Sites Recorded
1996	8,347	55
1997	9,225	56
1998	6,640	59
1999	8,250	65
2000	13,650	86
2001	15,603	72

Officer to enhance the management of cultural resources under the BLM's jurisdiction. Primary responsibilities include performing archaeological inventories prior to implementing projects with the potential to impact cultural resources, and consulting with Tribes as per Section 106 of the National Historic Preservation Act (NHPA).

Surface inventories were conducted to BLM Class III standards. Class III inventory is a continuous, intensive survey of an entire target area by walking close intervals (<30 meters) until the area has been thoroughly examined, aimed at locating and recording all archaeological properties that have surface indication. FY 2001 surveys were completed by an in-house Archaeologist, an Archaeological Technician, and one Apprenticeship in Science and Engineering (ASE) student. As a sponsor for the ASE program, the BLM helps high school students find their career paths and gain work experience. A total of 1,879 acres were surveyed in-house.

An additional 13,724 acres were inventoried by two contractors, under an Indefinite-Delivery, Indefinite-Quantity (IDIQ) contract. Designed to terminate in three years or when the maximum award of \$300,000 is reached, this contract allows the BLM to increase fuel treatment productivity and bypass having to write a contract for every individual project. The history of inventory activities on the Resource Area is displayed in Table 13.

## Visual Resources

Project proposals within the Klamath Falls Resource Area were reviewed to assure that proposed activities would meet the following visual resource management (VRM) classes. Fiscal Year 2001 reviews are listed in Table 14.

**Table 14. Visual Resource Management**

Class & Guidance	Total Acres in Class	FY 2001 Projects	Project Acres Reviewed
<b>VRM Class I:</b> Preserve the existing character of landscapes.	0	(None)	0
<b>VRM Class II:</b> Retain the existing character of landscapes.	33,500	Klamath Canyon Oak Thin/Juniper Removal	160
		Klamath Falls Forest Estates Community Protection	780
		Mechanical Treatments DNA	1,000
		Klamath Falls Forest Estates Community Protection	4,890
		Mechanical Treatments	3,000
<b>VRM Class III:</b> Partially retain the existing character of landscapes.	81,800	Dehlinger/Stukel Right-of-Way	5
		Horton Rim/Dairy and Windy Ridge Rangeland Health Treatment and Urban Interface Protection	3,000
		Surveyor Timber Sale	570
		Upper Midway Juniper Treatment	100
		Mechanical Treatments	8,000
<b>VRM Class IV:</b> Allow major modifications of existing character of landscapes.	96,700	Klamath Falls Forest Estates Community Protection	370

## Rural Interface Areas

Projects planned in rural interface areas have involved extra planning efforts to gather input and inform the residents of those areas about the proposed projects. The resource area has one large (Klamath Forest Estates) and two small (Harpold Dam and Grenada Butte) rural interface areas (RIAs). The area around Stukel Mountain is being considered for an RIA because of increasing population.

The Bly Mountain Timber Sale (Klamath Forest Estates) was sold and awarded in 1999. Extreme fire danger in the summer of 2001 forced BLM to suspend logging of the Bly Mountain Timber sale and grant the purchaser a one-year extension to complete the logging. The purchaser must complete the sale in the summer of 2002.



Hand cutting and piling of juniper and other dense fuels was completed under contract at the north end of the Bly Mountain rural inter face area south of highway 140 and along the Bonanza cutoff road. The BLM proposes to burn these piles during FY 2002.

The public was notified of proposed prescribed burning activities on Stukel Mountain via news releases to local newspapers, television and radio stations as well as legal notices published in the Herald and News. The prescribed burns planned in FY 99 were not completed in FY 2000 because the Secretary of the Interior placed a moratorium on prescribed burning. The moratorium was in response to the escaped prescribed burns in New Mexico. When the moratorium was lifted, local weather conditions were not suitable for prescribed burning. Unsuitable weather conditions continued throughout the 2001 burning season and resulted in rescheduling the Stukel Mountain prescribed burns for FY 2002.

## **Socioeconomic Conditions**

Socioeconomic conditions for the Klamath Falls Resource Area are influenced by local, regional and statewide activities. Klamath County trailed the State of Oregon in job growth between 1999 and 2000. Overall employment grew by 1.6 percent, compared to 1.8 percent statewide. In Klamath County, the construction and government sectors showed strong growth, up 31 percent and 6.3 percent, respectively. The manufacturing sector showed a slight decline because job losses in the lumber and wood products sector exceeded the gains in other types of manufacturing.

Statewide lumber and wood products employment has continued the downward trend, which began in 1989, decreasing by 900 jobs between 1999 and 2000. Total lumber and wood products employment in 2000 averaged 56,900 jobs within Oregon (see Table 15). Klamath County (Table 16) did not follow the statewide trend, gaining 50 jobs between 1999 and 2000. Data in Tables 15 and 16 are displayed by calendar year rather than fiscal year.

The socioeconomic activities and allocations for the resource area are displayed in Table 17.

Payments in Lieu of Taxes and O&C Payments were made in FY 2000 as directed in current legislation. The specific amounts paid to the county under each revenue sharing program in FY 2000 are displayed in Table 18. New legislation (P.L. 106-393, Secure Rural Schools and Community Self-Determination Act of 2000) was signed October 30, 2000, that extends payments through FY 2006. The law establishes a new formula for calculating payments, which is based on selecting the highest three years in the eligibility period (1986-1999). The law also allows for annual increases in the payment based on Consumer Price Index information. O&C Payments in FY 2001 will be based on this new legislation.

Fiscal Year 2001 was the first year that payments were made to counties under the Secure Rural Schools and Community Self-determination Act of 2000 (P.L. 106-393). Counties made elections to receive the standard O&C and CBWR payment as calculated under the Act of August 28, 1937 or the Act of May 24, 1939, or the calculated full payment amount as determined under P.L. 106-393. Klamath County elected to receive payments under the new legislation. Beginning in Fiscal Year 2001 and continuing through 2006 payments are to be made based on historic O&C and CBWR payments to the counties. Table 17 displays the payments made under each Title of P.L. 106-393 as well as the grand total. Actual payments for 2001 were made November 14, 2001.

Title I payments are made to the eligible counties based on the three highest payments to each county between the years 1986 and 1999. These payments may be used by the counties in the manner as previous 50-percent and "safety net" payments.

Title II payments are reserved by the counties in special account in the Treasury of the United States for funding projects providing protection, restoration and enhancement of fish and wildlife habitat, and other natural resource objectives as outlined in P.L. 106-393. BLM is directed to obligate these funds for projects selected by local Resource Advisory Committees and approved by the Secretary of Interior or her designee.

Title III payments are made to the counties for uses authorized in P.L. 106-393. These include: 1) search, rescue, and emergency services on Federal land, 2) community service work camps, 3) easement purchases, 4) forest-related educational opportunities, 5) fire prevention and county planning, and 6) community forestry.

**Table 15. Resident Labor Force, Employment by Industry, Oregon**

	Average 1970-1979	Average 1980-1989	Average 1984-88 Baseline	Average 1990-1994	Average 1995-1998	1999	2000
<b>Civilian Labor Force</b>	864,500	1,295,000	1,362,400	1,555,400	1,715,950	1,760,500	1,802,900
<b>Unemployment</b>	61,700	107,000	104,800	98,600	95,250	100,400	87,500
<b>Total Wage and Salary Employees</b>	709,200	1,044,600	1,068,680	1,299,075	1,492,800	1,572,400	1,603,300
<b>Total Manufacturing</b>	172,300	215,100	203,240	213,425	238,700	240,800	243,000
<b>Lumber &amp; Wood Products (aper)</b>	76,200	79,900	75,060	63,900	60,075	57,300	56,900
<b>Other Manufacturing</b>	96,100	135,200	128,180	149,525	178,625	183,500	186,100
<b>Total Non-Manufacturing</b>	536,900	829,500	865,440	1,085,625	1,254,125	1,331,600	1,360,300
<b>Construction &amp; Mining</b>	30,800	48,800	35,800	55,900	79,125	84,700	87,600
<b>Transportation, Commerce &amp; Utilities</b>	48,700	60,500	58,040	66,650	73,975	77,700	79,900
<b>Trade</b>	162,000	255,600	269,680	326,500	370,950	387,900	394,000
<b>Finance, Insurance &amp; Real Est.</b>	36,000	70,000	69,360	85,400	92,050	95,400	94,000
<b>Services &amp; Miscellaneous</b>	112,700	191,400	231,180	320,050	390,100	425,400	438,800
<b>Government</b>	146,700	203,200	201,360	231,175	247,900	260,500	266,000



**Table 16. Resident Labor Force, Employment by Industry, Klamath County**

	Average 1970-1979	Average 1980-1989	Average 1984-88 Baseline	Average 1990-1994	Average 1995-1998	1999	2000
<b>Civilian Labor Force</b>	19,310	26,910	25,184	27,088	29,002	28,760	29,010
<b>Unemployment</b>	1,350	2,780	2,626	2,624	2,552	2,500	2,340
<b>Total Wage and Salary Employees</b>	15,240	20,180	19,072	20,744	22,488	23,300	23,330
<b>Total Manufacturing</b>	3,870	4,940	4,464	3,918	3,940	3,900	3,670
<b>Lumber &amp; Wood Products</b>	3,460	4,370	3,608	2,960	2,728	2,470	2,540
<b>Other Manufacturing</b>	410	570	856	958	1,212	1,430	1,130
<b>Total Non-Manufacturing</b>	11,370	15,240	14,608	16,826	18,552	19,410	19,670
<b>Construction &amp; Mining</b>	470	620	412	696	1,055	1,030	1,340
<b>Transportation, Commerce Utilities</b>	1,460	1,510	982	962	880	830	820
<b>Trade</b>	3,290	4,780	4,838	5,168	5,612	5,510	5,360
<b>Finance, Insurance &amp; Real Est.</b>	610	810	854	966	975	1,070	1,020
<b>Services &amp; Miscellaneous</b>	2,260	3,170	3,244	4,274	5,070	5,580	5,570
<b>Government</b>	3,280	4,350	4,286	4,762	4,955	5,400	5,560

**Table 17. Klamath Falls Resource Management Plan, Summary of Socio-economic Activities and Allocations**

<b>Program Element</b>	<b>FY 96-99 Average</b>	<b>FY 2000</b>	<b>FY 2001</b>
<b>District budget<sup>1</sup></b>	\$3,624,000	\$4,200,000	\$10,300,000
<b>Timber sale collections O &amp; C<sup>2</sup> lands</b>	\$3,694,000	\$786,000	\$97,000
<b>Timber sale collections, PD<sup>2</sup> lands</b>	\$261,000	\$6,000	\$0.00
<b>Timber sale collections, USFWS lands</b>	\$1,000	\$0.00	\$0.00
<b>Recreation Fee Demonstration Project Receipts</b>	\$12,500 <sup>3</sup>	\$30,500	\$25,300
<b>Grazing Receipts</b>	\$15,300	\$15,800	\$14,500
<b>Value of timber sales, oral auctions (1) and negotiated (2)</b>	\$904,000 (1) \$25,000 (2)	\$1,234,000 (1) \$455,000 (2)	\$210,000 (1) \$10,000 (2)
<b>Pipeline Restoration Funds</b>	\$128,875	\$1,234,000	\$173,000
Recreation	\$40,034	\$455,000	\$173,000
Timber			
<b>Payments to Klamath County (O&amp;C)</b>	\$1,832,000	\$1,449,504	\$1,449,504
<b>Payments to Klamath County (PILT)<sup>2</sup></b>	\$220,000	\$ 226,970	\$330,000
<b>Hazardous Fuel Reduction Program<sup>4</sup></b>			
Fuel Reduction Contracts			\$2,900,000
Urban Interface Fuel Reduction			\$1,700,000
<b>Value of forest development contracts</b>	\$143,000	\$163,000	\$130,000
<b>Jobs-in-the-Woods Funds in contracts and agreements (total)</b>	\$285,000	\$212,000	\$206,000
<b>FY 2001 Detail</b>			
Reach Inc. (5 projects)			\$174,000
OYCC <sup>2</sup>			\$5,000
Bitterbrush Planting			\$27,000
<b>Challenge cost-share project contributions and value-in-kind or volunteer efforts.</b>			
Wood River	\$356,759	\$162,500	\$200,000
Other	\$54,650	\$0.00	\$65,000
<b>Value of land sales</b>	\$161,500	\$ 0.00	\$10,000

<sup>1</sup> Data Source: Oregon State BLM Office records.<sup>2</sup> O&C - Oregon and California Railroad lands, PD - Public Domain lands, PILT - Payments in Lieu of Taxes, OYCC – Oregon Youth Conservation Corps.<sup>3</sup> Klamath Falls Resource Area was added to the recreation Fee Demonstration Project in FY98.<sup>4</sup> Congress increased funding in response to the severity of the fires in the CY 2000 fire season.



**Table 18. Payments To Counties, FY 2001**

County	O & C Payments	CBWR Payments	PILT Payments
Benton	\$1,740,643.87		\$3,109.00
Clackamas	\$3,437,926.51		\$79,658.00
Clatsop	\$0.00		\$0.00
Columbia	\$1,276,059.21		\$0.00
Coos	\$3,654,732.69	\$432,938.33	\$10,335.00
Curry	\$2,260,978.70		\$90,337.00
Douglas	\$15,517,127.77	\$59,596.75	\$144,920.00
Jackson	\$9,706,722.24		\$70,519.00
Josephine	\$7,482,910.32		\$53,540.00
Klamath	\$1,449,504.15		\$330,367.00
Lane	\$9,458,943.75		\$209,371.00
Lincoln	\$223,000.64		\$28,004.00
Linn	\$1,635,338.02		\$72,799.00
Marion	\$904,391.48		\$31,145.00
Multnomah	\$675,196.38		\$11,585.00
Polk	\$1,338,003.83		\$0.00
Tillamook	\$346,889.88		\$14,217.00
Washington	\$390,251.12		\$2,252.00
Yamhill	\$446,001.28		\$3,944.00

## Recreation

Outdoor enthusiasts find a wide variety of recreation opportunities on the public lands managed by the Klamath Falls Field Office. Some of the more popular activities are camping, fishing, sightseeing, whitewater rafting, and birding. The Resource Area manages five campgrounds, a 3,200-acre wetland restoration project, river access points in the upper Klamath River canyon, and a number of dispersed, semi-developed camps. Refer to Table 19 for a list of recreation sites.

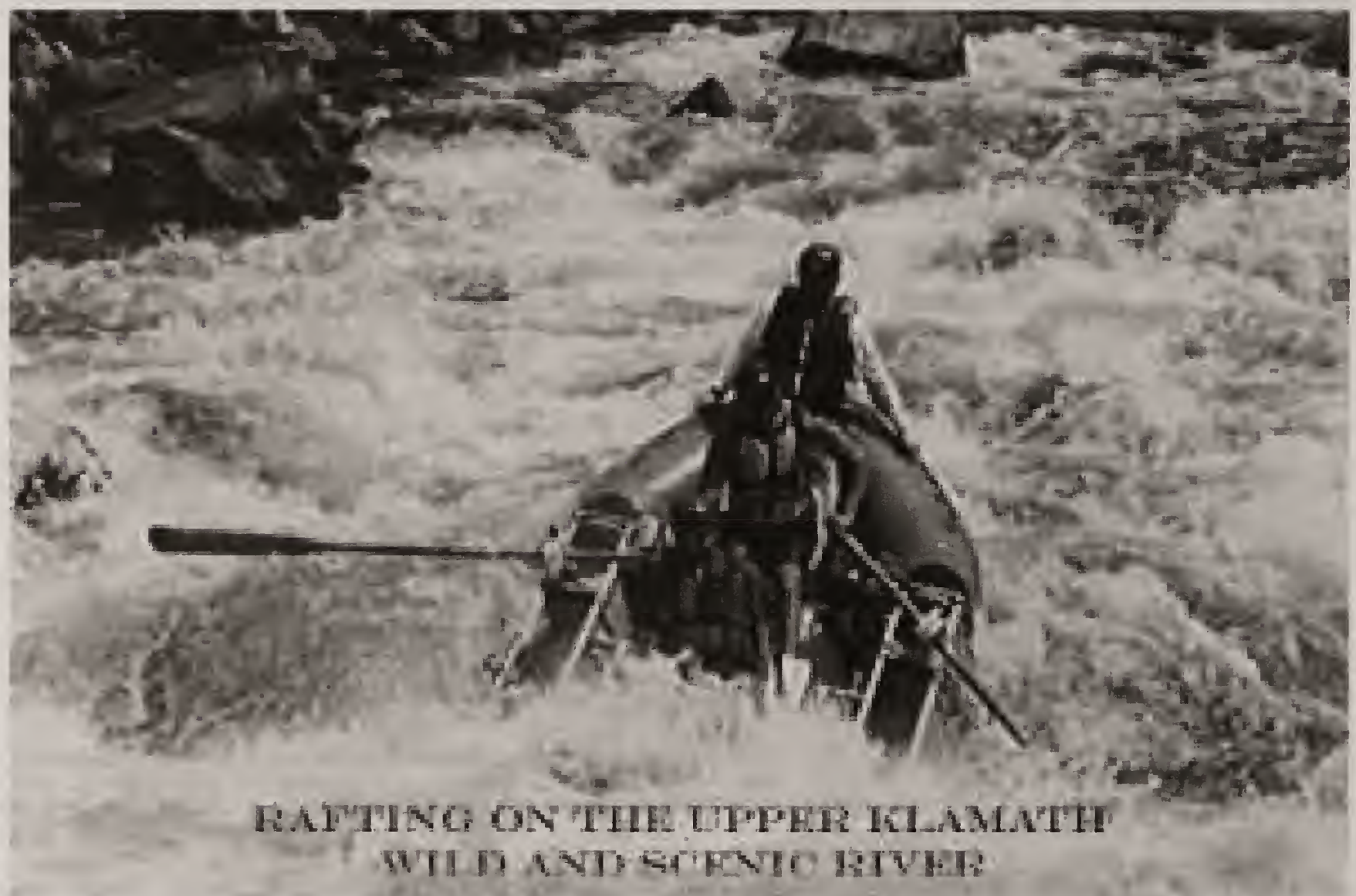
**Table 19. Summary of Recreation Sites and Use – FY 2001**

Site Name	Size (Acres)	Number of Camp Sites	Primary Recreation Opportunities	FY 2001 Visitor Use
Topsy	12	15	camping, fishing, boating	4000
Gerber	300	50	camping, fishing, boating	6000
Surveyor	10	5	camping, hunting	1000
Wood River Wetland	3200	Day Use Only	hiking, birding, canoeing	5000

The Resource Area issues and administers a number of Special Recreation Permits for activities such as guided white-water rafting, guided hunting and fishing, and special events (see Figure 10 and Table 20).

**Table 20. Summary of Special Recreation Permits - FY 2001**

Type of Special Recreation Permit (SPR)	Number of SPRs issued	Number of Visitor Use Days	Number of Race Participants	Permit Fees Collected
Whitewater Rafting (WR)	20	4,000	n/a	\$17,000
WR Photography	1	n/a	n/a	\$175
Guided Fishing and Hunting	2	20	n/a	\$340
<b>Totals</b>	<b>23</b>	<b>4,020</b>	<b>n/a</b>	<b>\$17,515</b>



**Figure 10. Rafting the Upper Klamath River**



## Recreation Pipeline Restoration Funds

This Congressional funding was appropriated for the completion of backlogged recreation projects in western Oregon, including BLM managed lands in Klamath County. The intent of this funding is to do facility or site backlog maintenance at existing recreation sites. New construction of recreation projects that address critical visitor safety or recreation management needs are also prioritized. During FY 2001, the third year of this funding, the Klamath Falls Resource Area contracted for approximately \$210,000 for various recreation projects including:

1. At Gerber Recreation Site, completed maintenance and chip-sealing of campground access roads and campsites, de-commissioned several unnecessary roads, installed barrier posts and new sidewalks, ordered new picnic tables, completed the north campground buck and pole fence and landscaped the affected areas.
2. At Stateline Recreation Site, in the Upper Klamath River canyon, road maintenance and addition of crushed rock surfacing.
3. At Topsy Recreation site, completed safety road improvements reconstruction of Topsy road.

## Recreation Projects Completed, and Proposed Projects

### Gerber Recreation Site

#### FY 2001 Projects Completed

1. Completed grading, the addition of crushed rock surfacing and chip-sealing of two miles of campground access roads, parking areas and campsites.
2. De-commissioned several unnecessary road segments within the campground. Constructed new and improved road access loop at Gerber South campground.
3. Installed new barrier posts, and sidewalk to access north campground boat ramp restroom, fish cleaning station and handicap camping site.
4. Completed the north campground buck and pole fence. Both Gerber campgrounds are now fenced to protect campers from roaming cattle.
5. Re-seeded decommissioned road areas and planted vegetative landscaping (public lands day events).
6. Replaced five failing outhouses with new handicap accessible vault toilets at various outlying campsites.
7. Install new handicap toilet at Barnes Valley Boat ramp.

#### FY 2002 Projects Planned

1. Replace ten damaged or worn picnic tables and vehicle barriers.
2. Install north campground host campsite RV holding tank
3. Install replacement picnic tables.
4. Install campground tent pad sites.

### Wood River Wetland

#### FY 2001 Projects completed

1. Ongoing planning and design for the second phase of the interpretive display project.
2. Continue planning and design for a gathering and staging area for environmental education activities and group presentations.
3. Paved one-half mile of access trail.

#### FY 2002 Projects Planned

1. Complete design for the second phase of the interpretive display project
2. Complete planning and design for a gathering and staging area for environmental education activities and wetland presentations.
3. Begin construction of gathering and staging area.

The work at Wood River Wetland will be partially funded with grants received from the US Fish and Wildlife Service and the State of Oregon's Watershed Enhancement Board.

## **Upper Klamath River**

### **FY 2001 Projects Completed**

1. Began construction work to renovate the Stateline Recreation Site. Work included road renovation and crushed rock surfacing.

### **FY 2002 Projects Planned**

1. Replace existing Stateline outhouses with handicap accessible double vault toilet.

## **Topsy and Surveyor Recreation Sites**

### **FY 2001 Projects Completed**

1. Volunteers contributed approximately 1,000 hours of labor for campground maintenance and construction projects, and while serving as camp hosts.
2. Park ranger and volunteer camp hosts were assigned to Topsy to assist visitors, manage use, and maintain the recreation site.
3. Replaced Surveyor campground spring-area buck and pole fence using volunteer labor.
4. Safety road improvements and crushed rock surfacing for Topsy Road.

### **FY 2002 Projects Planned**

1. Repair Topsy boat ramp and install boat ramp area lighting; Install a rinse shower for swimmers.
2. Chip-seal Topsy road in front of campground.
3. Install water system hook-up with J.C. Boyle dam housing system

## **Recreation Fee Demonstration Project**

Prior to 1998, all recreation fees were combined with other revenue sources from public O&C lands and allocated between the U.S. Department of the Interior and the O&C counties. Recreation facilities were wholly dependent on the funding provided through the Congressional appropriations process for operations and maintenance funding.

In March of 1998, The Klamath Falls Resource Area was added to the BLM-wide Recreation Fee Demonstration pilot program. This program allows the resource area to retain collected recreation fees to be used for maintenance of recreation sites and areas from which they were collected. A special account has been established for each recreation site and program.

The Association of O&C Counties supported the retention of all recreation fee revenues under the Fee Demonstration Pilot authority to help operate the BLM's recreation facilities and programs.

In FY 2001, a total of \$16,700 in fees were collected at the three participating recreation sites. The revenue from the Recreation Fee Demonstration program is used to fund a number of minor maintenance projects and for other costs associated with the recreation program. Fees generated from these sites and applied to the Fee-Demo program are shown in the Table 21. Revenues collected in FY 2001 are used to pay for projects in FY 2002.

Fee Demonstration funds were used to pay wages for three seasonal park rangers assigned to Topsy and Gerber Recreation Sites, and the upper Klamath Wild & Scenic River. Other funds were used to rent construction and maintenance equipment, to pay for toilet and dumpster rentals and service, to fund expenses for campground hosts and other volunteers, and to purchase construction and maintenance supplies.



**Table 21. Recreation Fee Demonstration Program, Fee Collection and Expenditure**

Recreation Site	FY 2001 Fees Collected - \$	FY 2001 - Monies Obligated from Fee Accounts - \$
Account Balance, FY01 (Carryover from FY 00)	\$15,850	
Topsy Recreation Site	\$ 3,850	\$15,100
Gerber Recreation Site	\$ 4,500	\$14,000
Special Recreation Permits - Upper Klamath River	\$ 8,350	\$2,000
<b>Total</b>	<b>\$32,550</b>	<b>\$31,100</b>

## Status of Recreation Plans

- Pacific Crest National Scenic Trail Special Recreation Management Area (SRMA) - Recreation Area Management Plan to be coordinated by Medford District. Completed August of 1998.
- Klamath River SRMA Recreation Area. Management Plan to be evaluated, updated and incorporated into the Klamath River Management Plan - A draft river plan/ environmental impact statement is scheduled to be released in summer, 2002.
- Klamath River Scenic Waterway Plan - A memorandum of understanding has been signed by the Oregon State Parks Department for joint management of the Wild and Scenic River/State Scenic Waterway. A separate chapter of the Klamath River Management Plan will address State Scenic Waterway issues.
- Hamaker Mountain SRMA - An analysis of recreation issues and projects were completed during the Topsy/Pokegema Landscape Analysis, July 1996 (OR #014-98-01). Further project planning is ongoing for future recreation project developments. Project implementation contingent upon adequate funding.
- Stukel Mountain SRMA - No recreation planning or watershed analysis has occurred. However, a local county advisory group (Stukel Road Task Force) completed a preliminary assessment of recreation issues in FY99. This information will be incorporated into future planning and project implementation. Project implementation is contingent upon adequate funding.
- Wood River Wetland SRMA- Completed Resource Management Plan July 1995. Project implementation is ongoing.
- Site-specific planning for ongoing recreation pipeline restoration funding projects is ongoing at several facilities, including Gerber recreation site, Topsy Recreation Site and Wood River Wetland.

## Volunteer Activities

Volunteers contributed approximately 4,760 hours of time and labor in FY 2001 to nearly every resource program in the Klamath Falls Resource Area (see Table 22). Volunteers continue to provide substantial assistance to the recreation, wildlife, and cultural resource programs. Volunteer positions vary widely, from campground hosting and park maintenance, to monitoring wildlife in the winter. In FY 2001, approximately 100 individuals (including 6

**Table 22. Fiscal Year 2001 Volunteer Statistics**

Group	Hours volunteered	Value of work
All groups excluding hosts	1,400	\$ 21,000
Campground hosts	3,360	\$ 50,400
All groups total:	4,760	\$ 71,400

campground hosts) participated. A group of Agency Lake area volunteers known as “The Usual Suspects” has adopted Wood River Wetland for maintaining the recreation facilities and area landscaping. For FY 2001, the Native American Student Union at Oregon Institute of Technology has been assisting the BLM with Wood River Wetland recreation use monitoring. In September 2001, the Klamath Falls Resource Area held its second Public Lands Day event. This nationally sponsored event, was held at Gerber Reservoir, where approximately 50 volunteers planted trees and shrubs, built buck and pole fence, and re-seeded obliterated roads.

## Wilderness

There is one Wilderness Study Area (WSA) in the Klamath Falls Resource Area, the Mountain Lakes WSA. There are 334 acres within the WSA boundary. The WSA borders the Eastside of the Mountain Lakes Wilderness Area. The WSA is managed under the interim wilderness management policy to protect its wilderness values. Interim protection measures include routine patrols, monitoring and restriction of vehicles to existing roadways.

## Tourism

The BLM is a member of the *Klamath/Lake/Modoc/Siskiyou Outdoor Recreation Working Group*, a consortium of government and private recreation and tourism entities from several counties within Oregon and California. The working group continues an active role in promoting tourism by providing pamphlets and brochures that show scenic byway travel routes, towns and cities, and areas of interest to visitors. The BLM participates in *The Answer People Group*, an informal informational sharing group for front line public contact representatives from public service and private tourism related businesses.

# Rangeland Management

## Overview

The rangeland management program administers livestock grazing activities on most of the lands in the Klamath Falls Resource Area (approximately 208,000 of the KFRA’s 215,500 acres). Grazing licenses are issued yearly, authorizing up to approximately 13,000 Animals Unit Months (AUMs) on 96 individual grazing allotments. A percentage of the grazing fees (37.5%) go to the U.S. treasury. The remaining fees are returned to the district and resource area for rangeland improvement projects to benefit wildlife and watershed resources while enhancing livestock grazing systems.



Existing projects such as water holes, spring developments, and fences are monitored and maintained, as necessary, either by range staff personnel or by the grazing users. Grazing use supervision is constantly performed during the grazing season to ensure compliance with approved grazing authorizations, with the efforts concentrated on resource priority allotments. The range program also collects vegetation inventory data, rangeland condition and trend information, actual livestock use information, and monitors vegetation utilization levels on high priority allotments. This information is evaluated - both formally and informally - to determine whether allotment goals and objectives are being met. Monitoring data is being utilized in an ongoing effort to assess our efforts to meet the Standards for Rangeland Health on all grazing lands.

As required by BLM policy, a Range Program Summary (RPS) is published periodically to update the public on implementation of the RMP. This summary typically includes information on the season-of-use and forage allocation by allotment. Since the original RPS, which was included as part of the June 1995 Klamath Falls Resource Area RMP/Record of Decision (Appendix H), there have not been enough significant changes in the range program to warrant publishing a full, independent update (i.e. recounting all of the information for all of the KFRA grazing allotments). As the resource area allotments are assessed (see next section) and other changes in grazing management take place, the public will be updated via this Annual Program Summary and Monitoring Report for the KFRA. The APS will fulfill the requirement for the RPS.



**Figure 11. Dry Meadow Rangelands in Gerber Block**



## **Fiscal Year 2001 Summary**

### **Rangeland Health Standards Assessments**

Four grazing allotments had Rangeland Health Standards Assessments completed during FY 2001: Chicken Hills, Dry Lake, Chase Mountain, and Dixie - all on the KFRA's "Westside". These allotments contain a total of 17,937 acres (14,677 in the KFRA, plus 3,260 that is actually in the Medford District, but administered for grazing by the KFRA). The KFRA assessments comprise 7% of the total KFRA grazed acres. In addition, draft assessments for 8 additional allotments in the Gerber Block were substantially completed as part of the ongoing Gerber/Willow Valley Watershed Analysis (discussed elsewhere in this APS). Completion of this analysis has been deferred due to other priorities. Given the deferral, the remaining Gerber Block Assessments will not be finalized until the Watershed Analysis is completed, which is not expected until at least the end of FY 2002.

Rangeland Health Standards Assessments compare accumulated rangeland monitoring data against the five Standards for Rangeland Health. These standards address watershed function in uplands; watershed function in riparian areas; ecological processes; water quality; and native, threatened and endangered, and locally important species. These assessments also compare the rangeland monitoring data against other pertinent objectives (i.e. land use plan, section 7 consultations, etc.) to see if current grazing use is meeting them. (Note: These Assessments only address grazing management - not other uses of the public lands.) On November 13, 1998, the Klamath Provincial Advisory Committee (PAC) approved the KFRA Plan for the Implementation of Standards and Guidelines. The KFRA Plan is the local plan to implement the policies and guidance stemming from the broad direction contained in the August 12, 1997 "Standards for Rangeland Health - Oregon/Washington Standards and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington". The entire assessment process for the resource area, in accordance with BLM policy, is scheduled to take place over 10 years (1999-2008).

In the case of three of the four allotments assessed in FY2001, current grazing management was found to be fully satisfactory and in balance with landscape capabilities. However, one allotment (Dixie) was found to have 4 of the 5 standards not being adequately met and livestock grazing was determined to be a contributing factor. Changes in grazing management on the Dixie allotment will be pursued during FY 2002.

### **Endangered Species Act Section 7 Consultation**

There are three grazing allotments in the Gerber Reservoir area (Horsefly, Pitchlog, and Dry Prairie) that are subject to formal consultation under section 7 of the Endangered Species Act. The existing Biological Opinion (BO) covering these allotments expired after the 1998 grazing season and was in need of renewal. All three were fully re-evaluated and re-consulted on in FY 99. Subsequent to the re-evaluation, the USFWS issued a memorandum (1-10-99-I-47 dated April 6, 1999) that indefinitely extended the existing BO, with some very minor modifications, primarily dealing with monitoring requirements. An end-of-year grazing report for the 2000 grazing season was prepared for these allotments, in response to a USFWS BO, and submitted to the USFWS during early FY 2001, as required by the BO. The BO was reaffirmed for the 2001 grazing year by USFWS memorandum (1-10-01-SP-035). The grazing report for the 2001 grazing year is pending at the time of publishing this APS.

### **Grazing Leases and Fees**

Ten grazing permits/leases were renewed or transferred during FY2001. This process included appropriate NEPA review/documentation.

Eighty-nine (89) billings were issued authorizing approximately 10,750 AUMs in grazing use and collecting approximately \$14,515 in grazing fees.



## Range Improvements

### **Tunnel Creek Fence Reconstruction:**

A riparian/meadow protection fence was built around the Tunnel Creek ACEC (near Buck Lake on the KFRA's west side) in 1997. Since that time, the traditional barbed wire fencing has been rendered totally inoperable because of heavy winter snow loads. During FY 2001, most of the fence was replaced with a high tensile, lay down fence that is more immune to snow loads. A small portion of the fence, still unfinished, will be completed during the summer of 2002.

### **Lucas Reservoir:**

A one acre-foot dug-out reservoir was constructed in the Goodlow Allotment (just northwest of Gerber Reservoir) during the fall of 2000 by the BLM road crew. The project was very successful, in that it filled and held water throughout 2001 – a drought year.

## Riparian Fence Maintenance

Range staff personnel continued to maintain all riparian exclosure and pasture fencing. This included the inspection and repair of approximately 25-30 miles of riparian related fencing within the resource area.

## Monitoring of Grazing Allotments

Monitoring of grazing use, and effects of that use, continued on priority allotments in accordance with the KFRA's *Coordinated Monitoring and Evaluation Plan for Grazing Allotments*. At least 20 high priority allotments had various monitoring data collected on them. These rangeland studies monitor utilization, ecological condition, vegetation trends, actual grazing use, and other resource attributes. As is typical of all grazing years, at least 100 grazing use supervision checks of high priority allotments were performed.

## Fiscal Years 1996-2000 Summary

### **Rangeland Health Standards Assessments**

The acreage of Assessments completed to date (FY 1999 & 2000) is 103,142 acres, or 50% of the KFRA allotted acres. With the inclusion of the 2001 completed Assessments, a total of 117,819 acres – or 57% of the KFRA – has been completed.

### **Rangeland Ecological Site Inventory**

Ecological Site Inventory (ESI): ESI fieldwork was completed for the entire Gerber Block (Eastside of the resource area). Approximately 110,000 acres were field inventoried during FY97 and FY98, which provided the Bureau information that assists in setting proper, achievable objectives for resource management. Ecological Site Inventory, the BLM's rangeland vegetation survey method, allows for classification and comparison of the current vegetation to its potential. Ecological Site Inventory also includes an Order 3 soil survey. Soil mapping was done by a soil scientist from the BLM's Lakeview District ESI crew; and vegetation mapping was done by resource area range management specialists.

## Monitoring of Grazing Allotments

Allotment monitoring evaluations were completed for all of the allotments within the Westside of the KFRA as part of two watershed analysis processes: "Spencer Creek Pilot Watershed Analysis" (August 1995) and "Topsy/Pokegama Landscape Analysis" (July 1996).

Rangeland monitoring studies were completed during FY96-00 in accordance with KFRA's *Coordinated Monitoring and Evaluation Plan for Grazing Allotments*. This directs the most monitoring emphasis on high priority (management category "I") allotments; in particular the 3 previously mentioned allotments that are under Section 7 Consultation. This includes

various rangeland condition, trend, and utilization studies; riparian condition and photo trend studies; actual grazing use supervision and information; and other rangeland monitoring studies as needed.

### **Four Mile Grazing Environmental Assessment**

Four Mile Grazing EA: An environmental assessment (EA#OR-014-96-3) analyzing the grazing use of 1,200 acres in the Four Mile area, as well as its potential impacts, was completed and distributed for public review in April 1998. (Four Mile consists of Bureau of Reclamation lands located northwest of Agency Lake that are administered by the BLM.) A proposed grazing decision selecting the proposed action (Alternative A - light, rotational grazing) was issued on September 25, 1998 and sent to all identified interested publics. The Oregon Natural Resources Council subsequently protested the grazing decision. In addition, the U.S. Fish and Wildlife Service has expressed concerns about grazing the property relative to potential impacts on basin water quality and listed species. Due to these concerns, the proposed grazing decision was cancelled and the BLM is pursuing "Area of Critical Environmental Concern" (ACEC) designation for the property. A neighboring landowner - and applicant for the grazing on the property - protested the cancellation of the proposed decision; the validity of this protest is currently pending a ruling from an Administrative Law Judge.

For more information on FY 1996-1999 accomplishments, please refer to the October 1997 *Lakeview District Planning Update for the Lakeview and Klamath Falls Resource Area*, the February 1999 *Fiscal Year 1998 Annual Program Summary & Monitoring Report for the Klamath Falls Resource Area*, the July 2000 *Klamath Falls Resource Area - Annual Program Summary*, and the Fiscal Year 2000 Annual Program Summary and Monitoring Report.

## **Wild Horse Management**

The Klamath Falls Resource Area has one designated wild horse herd and herd management area, the Pokegama Herd Management Area (HMA). This HMA is located in the western portion of the resource area, west and north of the Klamath River Canyon, south of Highway 66, and east of Jenny Creek, overlapping the border between California and Oregon.

In 1996, 20 head of horses were removed from the HMA and adopted to the public via the BLM's Adopt-a-Horse program. No removals were done in FY97, FY98, or FY99. Based on aerial and ground counts of the wild horse herd made during FY 2000, the herd size was 55 horses. This herd size was above the upper end of the Appropriate Management Level (AML) of 30-50 animals. This AML was initially established in the Klamath Falls Resource Area RMP (June 1995) and has been evaluated and re-affirmed in the Lakeview District Wild Horse Gather EA (OR-010-95-10) and again in the 1996 Topsy/Pokegama Landscape Analysis. Since the herd was above AML in FY 2000, a total of 18 horses were removed. These horses were transported to the Burns Wild Horse corrals and placed in the Adopt-a-Horse program. The most recent census (February 2001) counted 25 head in the HMA; the actual total number is believed to be at least 30 head.

A major portion of the KFRA's wild horse program consists of performing compliance checks of wild horses and burros adopted by residents of Klamath County. Compliance checks of adopted horses and their maintenance facilities is required to assure that adopters properly execute their responsibilities as required by the Private Maintenance and Care Agreement that adopters sign when adopting an animal. Adopters are eligible to receive title to the animal after one year of appropriate care. In FY 2001, the KFRA completed on-site inspection of 5 horses/burros - 100% of the recently adopted and untitled local animals. In FY00, 16 horses/burros were inspected; FY99, 21 were inspected; in FY98, 22 were inspected; and in FY97, 8 horses/burros were inspected for compliance.





**Figure 12. Horses from Pokegama Herd**

The KFRA sponsored a wild horse adoption in May of 2001, in conjunction with the Horse Packing and Wilderness Skills Clinic at the Klamath County Fairgrounds. Twenty-six horses were adopted out at the 2001 event. The previous event in May of 1999 adopted out 21 horses.

Starting in 1999, the Klamath Falls Resource Area teamed up with the local 4H & FFA equestrian clubs to promote wild horse awareness and education, and to provide scholarships for deserving young students. In 1999, a 3-year-old filly was green broke and the Klamath Falls 4-H/FFA members sold raffle tickets to people who qualified for horse adoption. "Goldie" now has a great home, and the local winner loves her new horse. The raffle was held at the Klamath County fair and generated \$1600 in donations for a scholarship fund for eligible equestrian members. For the year 2000, a green broke 2-year-old gelding named "Wiley" was adopted through the raffle. Equestrian members sold tickets and raised \$1400 towards the scholarship fund, and again the horse has a great new family. For 2001, a yearling filly named "Patches" was raffled by the same groups at the fair raising \$1440.

## **Forest Management and Timber Resources**

The Klamath Falls Resource Area manages approximately 215,000 acres of land located in Klamath County. Approximately 51,230 acres are located west of Klamath Falls and are within the Northwest Forest Plan area. Approximately 23,550 acres (50%) of the commercial forest land on the Westside are available for timber harvest. On the Eastside, there are approximately 16,200 acres of commercial forest land of which approximately 8,800 acres (50%) are available for harvest. The Klamath Falls Resource Management Plan provides for a sustainable timber harvest, known as the Allowable Sale Quantity (ASQ), from the Klamath



Falls Resource Area. On the Westside, the ASQ is 5.91 MMBF (million board feet). On the Eastside, the ASQ is 0.40 MMBF.

## Silvicultural Prescriptions

To meet the ASQ commitment, the Klamath Falls Resource Area to date has primarily used two types of treatments or prescriptions: Density Management and Mortality Salvage. In FY 2000, the KFRA also started implementing a third type of silvicultural prescription: Regeneration Harvest.

### Density Management

Density Management treatments are designed to improve or maintain forest health and are proactive efforts to improve stand resiliency by reducing stand densities and fuel loads. Density Management prescriptions include thinning from below to reduce competition to under-represented species as well as to improve the resiliency of the large-tree component. Approximately 20-30% of the trees are generally removed under a Density Management prescription. Small (five acres or less) patch cuts are included as part of the Density Management treatment. These are used in areas to regenerate the less shade-tolerant and under-represented species (pines and Douglas-fir). Excess trees of sub-merchantable size are sometimes cut and removed concurrently, and logging slash is treated or removed, which significantly reduces wildfire hazard and prepares the site for prescribed burning. In fiscal year 2001, the KFRA offered for sale approximately 2.93 MMBF of timber on 1,207 acres where Density Management prescriptions were applied.

### Regeneration Harvests

No sales containing a Regeneration Harvest prescription were sold in FY 2001. Per KFRA RMP guidelines, an average of 16-25 large green trees per acre are required to be left in Regeneration Harvest units. This prescription is primarily used in older stands, in decadent stands, and in stands where there is a need to initiate and/or enhance the development of seedlings and saplings in the understory while still maintaining an overstory component.

### Mortality Salvage

The other type of harvest prescription, Mortality Salvage, is primarily designed to remove scattered dead and dying trees. As a result of continuing local insect infestations and high winds in localized areas, the Klamath Falls Resource Area has been able to meet part of the ASQ by offering and negotiating salvage sales to capture the scattered mortality. Generally, the impacts are minimal unless the blowdown or infestation patch is large and concentrated. In fiscal year 2001, the Klamath Falls Resource Area did not sell any mortality salvage sales.

## Timber Sale Planning

The timber sale process, including the planning, watershed analysis, environmental analysis, consultation, and the biological and cultural surveys, is a two to four year process. The public is given the opportunity to comment on the proposal during the planning and scoping phase. Notices occur in the newspaper requesting comments during both the watershed analysis and environmental analysis period. In addition, public tours are announced. Once the layout, cruising, and appraisal is completed and the contract is prepared, the timber sale is ready to be offered and a final decision will appear in the local newspaper, stating when the sale will be auctioned. The tables below summarize the following:

Table 23	Timber Sale volume and acres committed for harvested since October 1, 1994
Table 24	Timber Volume Offered in fiscal year 2001
Table 25	Harvest Activity in FY 2001



Table 26	Timber Sales planned for fiscal year 2002 & 2003
Table 27	Status of all sold and awarded sales since signing of the RMP
Table 28	A list of Environmental Assessments and Watershed Analyses applicable to the different sales

## **Cumulative Status of Klamath Falls Timber Sale Volume and Acres**

Below is a summary by land use allocation of the timber volume and acreage that has been harvested in the KFRA since the signing of the RMP on June 2, 1995. The volume and acres are summarized by year, harvest method, land allocation, RMP/EIS assumed average, and percent of assumed average. Discrepancies between actual treatments and assumed averages are discussed in the monitoring section. All KFRA Westside lands are in the Southern General Forest Management Area (SGFMA), which is described in the Northwest Forest Plan.

## **FY 2001 Timber Sale Accomplishments**

### **Timber Sold in FY 2001**

The Klamath Falls Resource Area sold, and awarded, one sale in FY 2001; Grenada West. A second sale, Whiteline, went No-Bid and will be reoffered in FY 2002. Approximately 2.56 MMBF of timber from about 1,003 acres were sold (Table 24). The total sale price of this sale plus modifications to existing sales in FY 2001 was valued at approximately \$210,962.25. The Annual Sale Quantity for the Klamath Falls Resource Area is approximately 5.9MMBF per year. The shortfall in the Westside ASQ in FY 2001 was due to on-going litigation in regards to harvesting in northern spotted owl habitat within the boundary of the Northwest Forest Plan.

### **Harvest Activity in FY 2001**

During FY 2001, harvest activity occurred on two sales (Table 25). Approximately 0.792 MMBF of timber valued at approximately \$133,446.40 was removed from these sales.

### **FY 2002 Timber Sales Planned**

The annual timber sale plan (Table 26) may be changed, altered, or amended by the authorized officer. None of the proposed sales are set-asides.

#### **Eastside**

A small Eastside timber sale – Whiteline — is scheduled to be reoffered in FY 2002. It was offered for sale in August of 2001 and no bids were received. Approximately 203 acres are within the sale area and approximately 366 MBF is scheduled for harvesting. There may be some slight alterations to the sale in FY 02.

#### **Westside**

Two Westside sales are scheduled to be sold in fiscal year 2002: Slim Chicken and Saddled Again. Slim Chicken was scheduled for selling in FY 2001, however, due to litigation surrounding harvesting in northern spotted owl habitat, the sale was postponed. Watershed Analyses have been prepared in the respective watersheds and environmental assessments have been prepared for the sales. In addition, the Klamath Falls Resource Area is in the process of planning some potential treatments in the Surveyor Mtn. area. Depending upon winter storms, the KFRA may have a small salvage sale in the Surveyor Mtn. area as well. An environmental assessment is being prepared for the Upper Spencer Creek / Surveyor Analysis Area. A notice in the newspaper will be published requesting public comments.

## **Status of Sold & Awarded Klamath Falls RMP Timber Sales**

Table 27 lists the status of Klamath Falls Resource Area sales that have been sold and awarded since signing of the RMP in June of 1995. As shown, the KFRA presently has ten completed timber sale contracts and four active contracts. Five timber sales have been monitored, three of which have involved the Regional Ecosystem Office (REO) review team,

**Table 23. Klamath Falls Resource Area Timber Sale Volume and Acres**

Entire Resource Area											
Timber Sale Volume In Thousand Board Feet (MBF)											
MBF	FY 95	FY 96	FY 97	FY 98	FY 99	FY00	FY01	FY 95-01 Total	FY 95-01 Annual Average	FY 95-01 RMP/EIS Assumed Annual Average	Percent of Assumed Average Completed
Total Timber Sale Program	4612	7247	6667	5925	3546	9594	2957	40,547	5792		
Total Matrix Timber Sales	4493	7162	6624	5883	3493	9275	2934	39,863	5695	6310	90%
Total All Reserves	119	85	43	42	53	319	23	684	98		
Total Key Watersheds	3180	7073	6130	2618	2155	4702	0	25,858	3694		
Total Regeneration Harvests	0	0	0	0	0	153	0	153	22		
Total Density Mgt	3494	4012	1802	5435	1024	7206	2933	25,906	3701		
Total Mortality Salvage	990	3150	4776	448	2469	1893	1	13,727	1961		
Total Small Sales	4	0	46	0	0	23	1	74	11		
Total R/W Clearing	4	0	0	0	0	0	0	4	1		
Total UMLSR	0	0	22	0	0	0	0	22	3		
Total RR	64	84	21	42	53	48	0	312	45		
Total Admin Withdrawal	55	1	0	0	0	271	23	350	50		
<b>ACRES</b>											
Total Timber Sale Program	2149	2459	3761	1926	906	3129	1257	15,587	2227		
Total Matrix Timber Sales	2083	2440	3759	1919	866	3035	1207	15,309	2187	1228	178%
Total All Reserves	66	19	2	7	40	94	50	278	40		
Total Key Watersheds	793	2440	3550	440	210	1214	0	8647	1235		
Total Regeneration Harvests	0	0	0	0	0	39	0	39	6	131	5%
Total Density Mgt	1081	440	209	1869	606	2746	1207	8158	1165	1097	106%
Total Mortality Salvage	1000	2000	3550	50	260	250	0	7110	1016		
Total Small Sales	0	0	0	0	0	0	0	0	0		
Total R/W Clearing	2	0	0	0	0	0	0	2	0		
Total UMLSR	0	0	2	0	0	0	0	2	0		
Total RR	36	19	0	7	40	34	0	136	19		
Total Admin Withdrawal	30	0	0	0	0	60	50	140	20		
Total Timber Sale Program	3334	7075	6172	5864	2417	9351	2573	36787	5255		
Total Matrix Timber Sales	3215	6990	6130	5822	2417	9275	2573	36422	5203	5910	88%
Total All Reserves	119	85	43	42	0	76	0	365	52		
Total Key Watersheds	3180	7073	6310	2618	2155	4702	0	25858	3694		
Total Regeneration Harvests	0	0	0	0	0	153	0	153	22	1890	1.2%
Total Density Mgt	3207	3990	1311	5374	19	7206	2573	23680	3383	4020	84%
Total Mortality Salvage	0	3000	4776	448	2398	1893	0	12515	1788		
Total Small Sales	4	0	43	0	0	23	0	70	10		
Total R/W Clearing	4	0	0	0	0	0	0	4	1		
Total UMLSR	0	0	22	0	0	0	0	22	3		
Total RR	64	84	21	42	0	48	0	259	37		
Total Admin Withdrawal	55	1	0	0	0	28	0	84	12		

**ACRES**



**Table 23. (Cont.) Klamath Falls Resource Area Timber Sale Volume and Acres**

Entire Resource Area											
Timber Sale Volume In Thousand Board Feet (MBF)											
MBF	FY 95	FY 96	FY 97	FY 98	FY 99	FY00	FY01	FY 95-01 Total	FY 95-01 Annual Average	FY 95-01 RMP/EIS Assumed Annual Average	Percent of Assumed Average Completed
Total Timber Sale Program	861	2459	3552	1896	240	3089	1003	13100	1871		
Total Matrix Timber Sales	795	2440	3550	1889	240	3035	1003	12952	1850	959	193%
Total All Reserves	66	19	2	7	0	54	0	148	21		
Total Key Watersheds	793	2440	3550	440	210	1214	0	8647	1235		
Total Regeneration Harvests	0	0	0	0	0	39	0	39	6	131	4%
Total Density Mgt	793	440	0	1839	0	2746	1003	6821	974	828	118%
Total Mortality Salvage	0	2000	3550	50	240	250	0	6090	870		
Total Small Sales	0	0	0	0	0	0	0	0	0		
Total R/W Clearing	2	0	0	0	0	0	0	2	0		
Total UMLSR	0	0	2	0	0	0	0	2	0		
Total RR	36	19	0	7	0	34	0	96	14		
Total Admin Withdrawal	30	0	0	0	0	20	0	50	7		
Total Timber Sale Program	1277	172	494	61	1129	243	384	3760	537		
Total Matrix Timber Sales	1277	172	494	61	1076	0	361	3441	492	400	123%
Total All Reserves	0	0	0	0	53	243	23	319	46		
Total Key Watersheds	0	0	0	0	0	0	0	0	0		
Total Regeneration Harvests	0	0	0	0	0	0	0	0	0		
Total Density Mgt	287	22	491	61	1005	0	360	2225	318		
Total Mortality Salvage	990	150	0	0	71	0	1	1212	173		
Total Small Sales	0	0	4	0	0	0	1	4	1		
Total R/W Clearing	0	0	0	0	0	0	0	0	0		
Total UMLSR	0	0	0	0	0	0	0	0	0		
Total RR	0	0	0	0	53	0	0	53	8		
Total Admin Withdrawal	0	0	0	0	0	243	23	266	38		
<b>ACRES</b>											
Total Timber Sale Program	1288	0	209	30	666	40	254	2487	355		
Total Matrix Timber Sales	1288	0	209	30	626	0	204	2357	337	269	125%
Total All Reserves	0	0	0	0	40	40	50	130	19		
Total Key Watersheds	0	0	0	0	0	0	0	0	0		
Total Regeneration Harvests	0	0	0	0	0	0	0	0	0	33	
Total Density Mgt	288	0	209	30	606	0	204	1337	191	269	71%
Total Mortality Salvage	1000	0	0	0	20	0		1020	146		
Total Small Sales	0	0	0	0	0	0	0	50	7		
Total R/W Clearing	0	0	0	0	0	0	0	0	0		
Total UMLSR	0	0	0	0	0	0	0	0	0		
Total RR	0	0	0	0	40	0	0	40	6		
Total Admin Withdrawal	0	0	0	0	0	40	50	90	13		

\* Density Management - All partial harvests, except salvage, including commercial thinning and selective cutting in Matrix and Riparian Reserves.

\*\* 1995-2000 Annual Average - The annual average is calculated by full fiscal years for 1995-2001.

\*\*\* ASQ = Allowable Sale Quantity based on RMP from lands allocated to planned, sustainable harvest

**Table 24. Timber Volume Sold in FY 2001**

<b>Name</b>	<b>Acres</b>	<b>Volume (MMBF)</b>	<b>Value</b>
Grenada West	1,003	2.562	\$210,209
Whiteline *	203	0.366	\$0
Modifications	0	0.011	\$753
<b>Totals (BLM)</b>	<b>1,206</b>	<b>2.939</b>	<b>\$210,962</b>

Whiteline Timber Sale went "No Bid." It will be re-offered in FY 2002.

**Table 25. Harvest Activity for FY 2001**

<b>Timber Contract No.</b>	<b>Sale Name</b>	<b>Harvest Acres</b>	<b>Volume Yarded (MMBF)</b>	<b>Value</b>
<b>98-3</b>	Grenada East	208	586	\$93,340
<b>99-1</b>	Muddy Tom	75	206	\$40,106
<b>Totals</b>		<b>283</b>	<b>792</b>	<b>\$133,446</b>

*Data Source:* Timber Sale Information System (TSIS)



**Table 26. Planned Timber Sales (FY 2002 & 2003)**

FY	Sale Name	Location	Area	Sale Date	Vol (MMBF)	Acres	Harvest Prescription#
01	Whiteline (Re-offer – Did not sell in FY 01)	T.37S., R.9E., 3,13,14	Eastside	May 2002	0.360	200	DM/UR
02	Slim Chicken.	T.40S.,R.7E., 19,21,29,31.	Westside	June 2002	3.6	1,800	DM/UR
02	Saddled Again	T.39S., R.6E., 9,17,19,21	Westside	June 2002	4.1	500	DM/RH/MS/UR
02	Sinking Salvage	Undetermined	Westside	Undecided	0.100	500	MS
03	Surveyor Mtn.	T.38S.,R.5E., S.15,21,23,25,26, 27,35,36 T.39S.,R.5E., S.1 T.39S.,R.6E., S.6,7	Westside	2003	10.0	550	DM/MS/RH

**NOTES:**

The sales listed above do not include small negotiated sales such as Right-of-Ways.

DM = Density Management sales are designed primarily to improve forest health conditions. Silvicultural prescriptions are written to maintain uneven aged stands and also maintain and improve the health and resiliency of primarily the shade intolerant species: ponderosa pine, sugar pine and Douglas-fir. They are also designed to reduce stand densities, fuel loads, and risk of stand replacing wildfires.

MS = Mortality Salvage sales are designed to capture the immediate but scattered mortality (dead or dying trees) occurring over the Resource Area. This primarily involves only the removal of the recent mortality within the stand. Normally, less than 10% of the volume removed is live trees in the mortality salvage sales. Some thinning does occur beneath the old growth pines. Failure to remove the immediate mortality results in wood deterioration and complete loss of commercial value within approximately two years.

UR = Understory Reduction - Part of the objective of the sale is to reduce the density of primarily submerchantable (3"-7" diameter) shade tolerant species in the understory to reduce fire risk and ladder fuels as well as to enhance health of overstory trees.

RH = Regeneration Harvest - Designed primarily to initiate and to enhance the development of seedlings and saplings in the understory while still maintaining an overstory component. Per KFRA RMP requirements, of an average of 16-25 large green trees per acre will be left in Regeneration Harvest Units.

**Table 27. Status of Sold & Awarded Timber Sales**

FY Sold	Timber Sale Name	Location	Area	Date	Volume (MMBF)	Acres	Harvest Prescription	Percent Completed /Monitored
95	Frosty One	Upper Johnson Creek Area	Westside	9/95	2.8	829	DM/UR	100%
96	Too Frosty	Upper Johnson Creek Area	Westside	1/96	2.5	459	DM/UR	100% Complete; <b>Monitored FY 1997</b>
96	West Rome I	KFRA Lands North of HWY 66	Westside	6/96	3.0	2,000	MS	100%
96	Salvage	Lower Spencer	Westside	12/96	2.5	2,000	MS	100% Complete; <b>Monitored FY 1998</b>
97	Salvage	KFRA Lands North of HWY 66	Westside	12/96	2.0	1,500	MS	100%
97	West Rome II	KFRA Lands North of HWY 66	Westside	12/96	2.0	1,500	MS	100% Complete; <b>Monitored FY 2000</b>
97	Salvage	Stukel Mtn.	Eastside	6/97	0.30	300	DM	100% Complete; <b>Monitored FY 2000</b>
97	Stukel Mtn. SKB Neg.	Stukel Mtn Area	Eastside	6/97	0.30	300	DM	100% Complete; <b>Monitored FY 2000</b>
97	Salvage	Blowdown - Buck Mtn.	Westside	6/97	0.05	50	MS	100%
98	Kakapo Stew	Lower Spencer Creek Area	Westside	12/97	2.0	397	DM/UR	100% Complete; <b>Monitored FY 1999</b>
98	Grenada East	South of HWY 66 - West of Hamaker Mtn.	Westside	7/98	2.5	1,300	DM/UR	100% Complete; <b>Monitored FY 2001</b>
98	STH Neg.	Blowdown - Burton Flat Area	Westside	9/98	0.05	50	MS	100%
98	Salvage	Klamath Forest Estates / Bly Mtn. Area	Eastside	7/99	1.06	646	DM	5 %
99	Bly Mtn.	Bly Mtn. Area	Eastside	7/99	1.06	646	DM	5 %
00	Muddy Tom	South of HWY 66 - West of Klamath River Canyon	Westside	6/00	4.6	1,873	DM/UR	10%
00	Clover Hookup	North of HWY 66 - Lower Spencer Creek Area	Westside	8/00	2.8	944	DM/UR/RH	0%
01	Grenada West	South of HWY 66 - East of the Klamath River Canyon	Westside	8/01	2.6	1003	DM	0%
<b>Non BLM Sales</b>								
	USFWS	Bear Valley Wildlife						
98	Bear Valley	Refuge	Westside	6/97	1.0	245	DM/UR	100%

**NOTES:**

- The sales listed above do not include small, negotiated sales such as Right-of-Ways.
- W/E = W = Westside Sale (West of Klamath Falls). E = Eastside Sale (East of Klamath Falls).
- DM = Density Management sales are designed primarily to improve forest health conditions. Silvicultural prescriptions are written to maintain uneven aged stands and also maintain and improve the health and resiliency of primarily the shade intolerant species: ponderosa pine, sugar pine and Douglas-fir. They are also designed to reduce stand densities, fuel loads, and risk of stand replacing wildfires.
- MS = Mortality Salvage sales are designed to capture the immediate but scattered mortality (dead and/or dying trees) occurring over the Resource Area. This primarily involves only the removal of the recent mortality within the stand. Normally, less than 10% of the volume removed in the mortality salvage sales is live trees. Some thinning does occur beneath the old growth pines. Failure to remove the immediate mortality results in wood deterioration and complete loss of commercial value within approximately two years.
- UR = Understory Reduction - Part of the objective of the sale is to reduce the density of primarily submerchantable (3"-7" diameter) shade tolerant species in the understory to reduce fire risk and ladder fuels as well as to enhance health of overstory trees.
- RH = Regeneration Harvest - Designed primarily to initiate and to enhance the development of seedlings and saplings in the understory while maintaining an overstory component. Per KFRA RMP requirements, an average of 16-25 large green trees per acre will be left in Regeneration Harvest Units.
- USFWS – Bear Valley – The first proposed timber sale within the Bear Valley National Wildlife Refuge. The sale is designed to maintain and improve forest health within the refuge by thinning overstocked stands. Designed mainly to thin understory trees beneath eagle roosting trees and also to reduce fuel loads and risk of stand replacement wildfires.
- Timber Sale monitored by IDT and/or REO review team.



**Table 28. Environmental Assessments and Watershed Analysis for Timber Sales**

<b>FY</b>	<b>Sale Name</b>	<b>Environmental Assessment Name, Number, and Date</b>	<b>Supporting Watershed Analysis</b>
95	Frosty One	Frosty Forest Health Treatments & Recreation Site Enhancement ORO14-95-3, dated 8/25/95	Jenny Creek (Feb. 1995)
96	Too Frosty	Frosty Forest Health Treatments & Recreation Site Enhancement OR-O14-95-3, dated 8/25/95	Jenny Creek (Feb. 1995)
96	West Rome I Salvage	Roaming Salvage Timber Sales EA, OR-014-96-4, dated 5/21/96	Spencer Creek (Aug. 1995) Jenny Creek (Feb. 1995)
97	Lower Spencer Salvage	Roaming Salvage Timber Sales EA, OR-014-96-4, dated 5/21/96	Spencer Creek (Aug. 1995)
97	West Rome II Salvage	Roaming Salvage Timber Sales EA, OR-014-96-4, dated 5/21/96	Spencer Creek (Aug. 1995) Jenny Creek (Feb. 1995)
97	Stukel Mountain	Bryant/Stukel Salvage, Thinning, and Bald Eagle Enhancement Timber Sale, OR-014-94-12, dated 2/28/95	Landscape analysis, dated 2/28/95
97	USFWS Bear Valley	USFWS Bald Eagle Habitat Improvement Project, dated 10/25/95	Not applicable
98	Kakapo Stew	Lower Spencer Creek Watershed Forest Health Treatment, OR-014-96-2, per FONSI dated 5/17/96	Spencer Creek (Aug. 1995)
98	Grenada East	Topsy/Pokegama/Hamaker Forest Health Treatments EA, OR-014-98-1, dated 6/98	Topsy/Pokegama Landscape Analysis (July 1996)
99	Bly Mtn.	Bly Mtn., Swan Lake Rim, Whiteline Reservoir Forest Health and Woodland Treatments EA, OR-014-99-6, dated 5/24/1999	Not Applicable
00	Muddy Tom	Topsy/Pokegama/Hamaker Forest Health Treatments EA, OR-014-98-1, dated 6/98	Topsy/Pokegama Landscape Analysis (July 1996)
00	Clover Hookup	Lower Spencer Creek Watershed Forest Health Treatment, OR-014-96-2, per FONSI dated 5/17/96	Spencer Creek (Aug. 1995)
01	Grenada West	Topsy/Pokegama/Hamaker Forest Health Treatments EA, OR-014-98-1, dated 6/98	Topsy/Pokegama Landscape Analysis (July 1996)
01	Whiteline	Bly Mtn., Swan Lake Rim, Whiteline Reservoir Forest Health and Woodland Treatments EA, OR-014-99-6, dated 5/24/1999	Not Applicable

**Table 29. Summary of Volume Sold**

Sold (ASQ/Non-ASQ Volume - MMBF)	FY95-98		FY99-01		FY95-01 Total		FY 95-01 Declared ASQ <sup>1</sup>	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
ASQ Volume - Harvest Land Base	22.2	2.0	14.2	1.1	36.4	3.1	41.4	2.8
Non-ASQ Volume - Reserves	0.3	0	0.1	0.3	0.4	0.3	NA	NA
Total	22.5	2.0	14.3	1.4	36.8	3.4	41.4	2.8

Sold - Unawarded As of 09/30/01 (ASQ/Non-ASQ Volume - MMBF)	FY95-98		FY99-01		FY95-01 Total	
	West- side	East- side	West- side	East- side	West- side	East- side
ASQ Volume - Harvest Land Base	0	0	0	0	0	0
Non-ASQ Volume - Reserves	0	0	0	0	0	0
Total	0	0	0	0	0	0

<sup>1</sup> Declared annual ASQ times 7. See Table R-1 of KFRA Record of Decision and RMP.

**Table 30. Volume and Acres Sold by Allocations**

ASQ Volume – MMBF (Harvest Land Base)	FY95-98		FY99-01		FY95-01 Total		Decadal Projection	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
Matrix	22.2	2.0	14.2	1.1	36.4	3.1	59.1	4.0
Adaptive Management Area	NA	NA	NA	NA	NA	NA	NA	NA

ASQ Acres (Harvest Land Base)	FY95-98		FY99-01		FY95-01 Total		Decadal Projection <sup>1</sup>	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
Matrix	8674	1527	4278	626	12952	2153	9590	2690
Adaptive Management Area	NA	NA	NA	NA	NA	NA	NA	NA

ASQ Volume - MMBF (Key Watershed)	FY95-98		FY99-01		FY95-01 Total		Decadal Projection	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
Key Watersheds	18.8	NA	6.8	NA	25.6	NA	30.3	NA

<sup>1</sup> See Table R-1 of KFRA Record of Decision and RMP, and Appendix V-8 – Volume II of Final RMP.



**Table 31. Timber Sales Sold By Harvest Types**

ASQ Volume – MMBF (Harvest Land Base)	FY95-98		FY99-01		FY95-01 Total		Decadal Projection	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
Regeneration Harvest	0	0	0.2	0	0.2	0	18.9	0
Commercial Thinning & Density Mgt.	13.9	0.9	9.8	1.0	23.7	1.9	40.2	4.0
Other (Mortality Salvage)	8.3	1.1	4.3	0.1	12.5	1.2	0	0
Total	22.2	2.0	14.3	1.1	36.4	3.1	59.1	4.0

ASQ Acres (Harvest Land Base)	FY95-98		FY99-01		FY95-01 Total		Decadal Projection <sup>1</sup>	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
Regeneration Harvest	0	0	39	0	39	0	1130	0
Commercial Thinning & Density Mgt.	3072	527	3749	606	6821	1133	8,280	2690
Other (Mortality Salvage)	5602	1000	490	20	6092	1020	0	0
Total	8674	1527	4278	626	12,952	2153	9590	2960

Reserve Acres	FY95-98		FY99-01		FY95-01 Total		Decadal Projection	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
Late-Successional Reserves	2	0	0	0	2	0	NA	NA
Riparian Reserves	62	0	34	40	96	40	NA	NA
Total	64	0	34	40	98	40	NA	NA

<sup>1</sup> See Table R-1 of KFRA Record of Decision and RMP, and Appendix V-8 – Volume II of Final RMP.

**Table 32. Timber Sale Acres Sold by Age Class**

Regeneration Harvest (Harvest Land Base)	FY95-98		FY99-01		FY95-01 Total		Decadal Projection	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
0-70 Years	0	0	0	0	0	0	580	0
80-140 Years	0	0	0	0	0	0	445	0
150-190 Years	0	0	39	0	39	0	92	0
200+ Years	0	0	0	0	0	0	193	0
Total	0	0	39	0	0	39	1310	0

Density Management & Commercial Thinning (Harvest Land Base)	FY95-98		FY99-01		FY95-01 Total		Decadal Projection	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
0-70 Years	1024	312	1181	63	2205	375	2241	734
80-140 Years	986	167	1646	467	2632	634	3817	1445
150-190 Years	440	48	735	76	1175	124	1142	511
200+ Years	622	0	187	0	809	0	1080	0
Total	3072	527	3749	606	6821	1133	8280	2690

Mortality Salvage & Other (Harvest Land Base)	FY95-98		FY99-01		FY95-01 Total		Decadal Projection	
	West- side	East- side	West- side	East- side	West- side	East- side	West- side	East- side
0-70 Years	1512	270	0	0	1512	270	0	0
80-140 Years	2577	540	490	20	3067	560	0	0
150-190 Years	784	190	0	0	784	190	0	0
200+ Years	729	0	0	0	729	0	0	0
Total	5602	1000	490	20	6092	1020	0	0



### Westside Volume Sold By Harvest Type

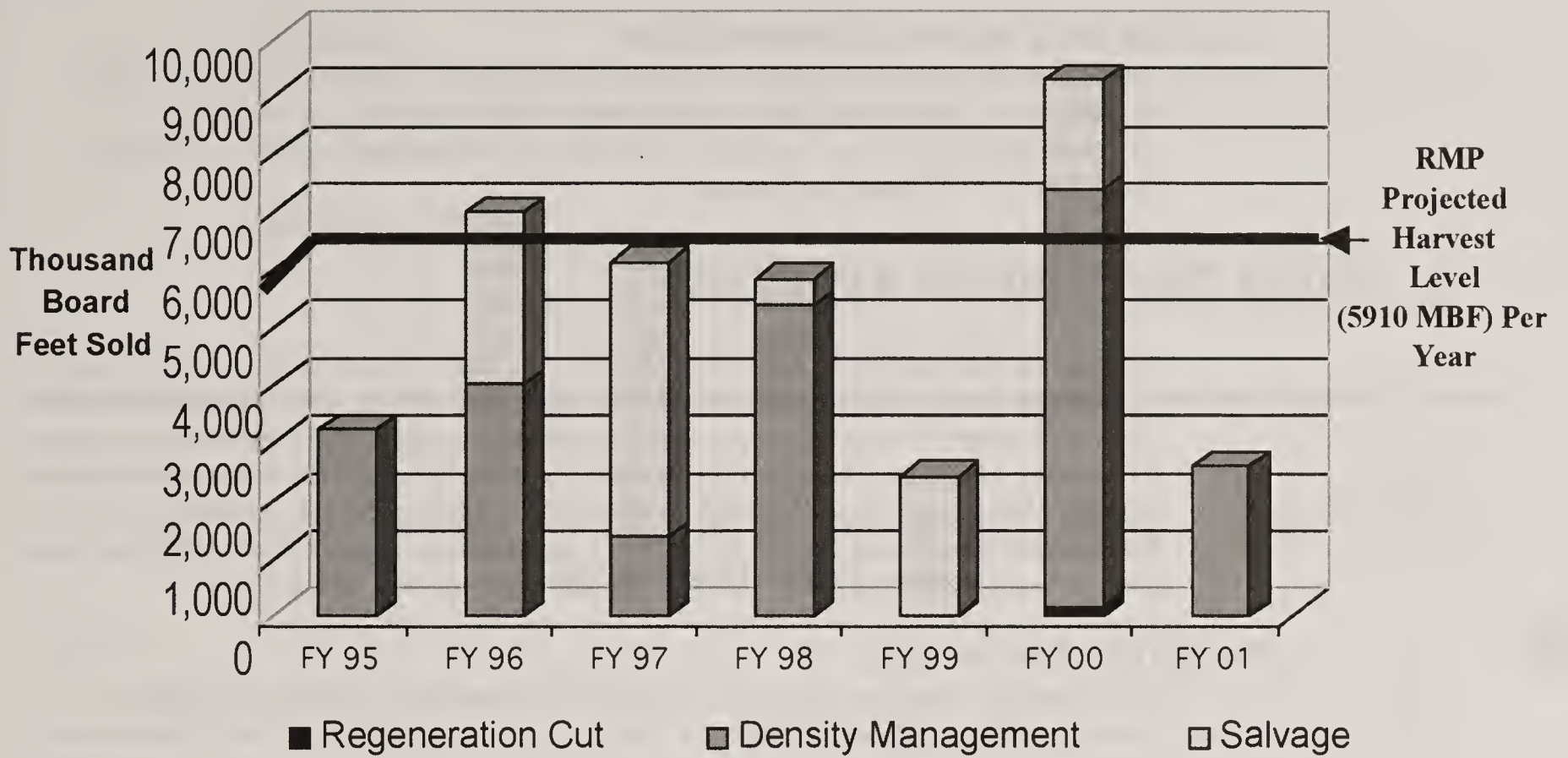


Figure 13. Westside Timber Volume Sold (Listed by Harvest Type)

### Eastside Volume Sold By Harvest Type

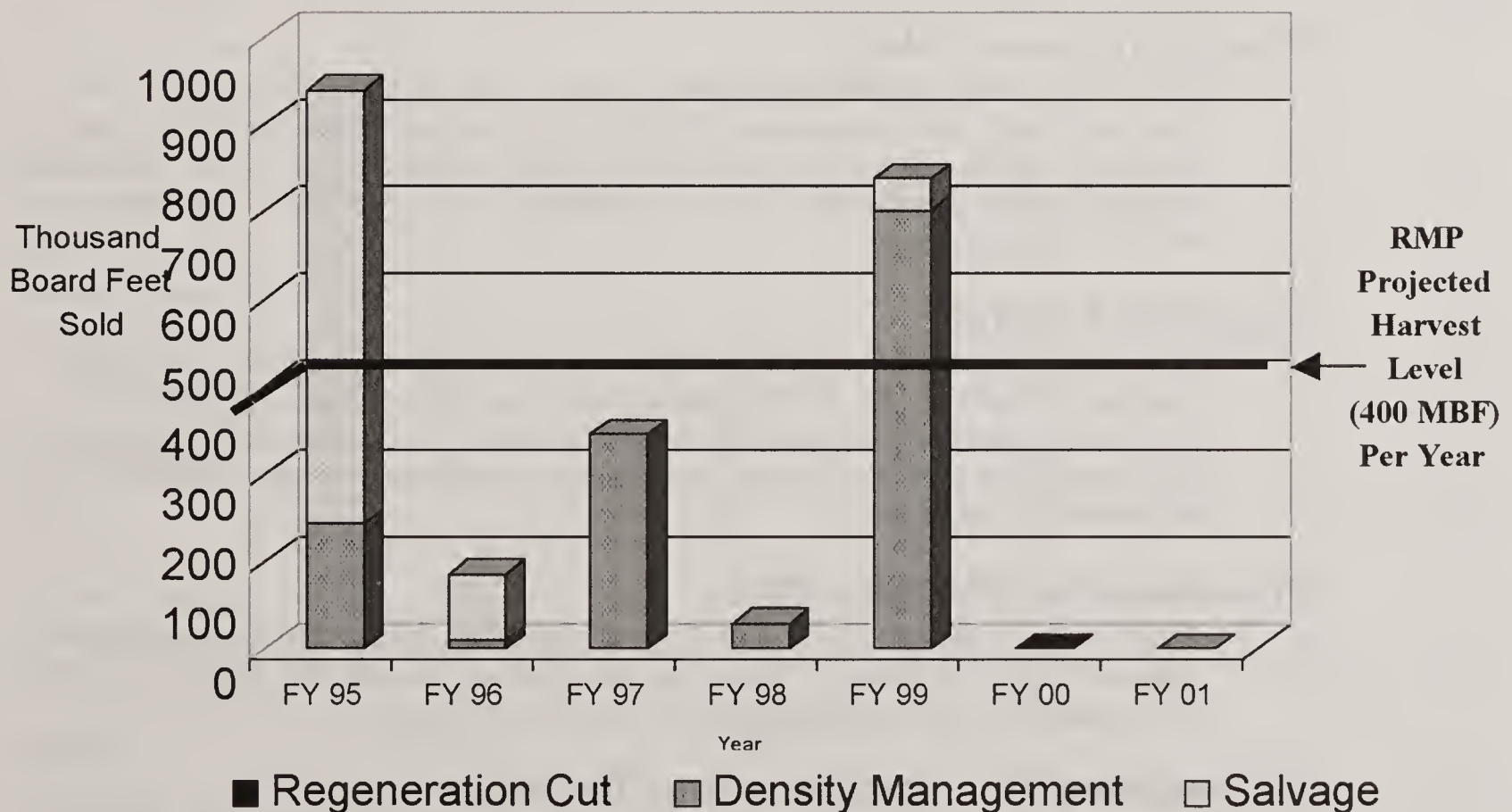


Figure 14. Eastside Timber Volume Sold (Listed by Harvest Type)

and all have involved the resource area interdisciplinary team. The results from the monitoring are discussed in the monitoring section.

## **Analysis for Proposed Timber Sales**

The National Environmental Policy Act and the Northwest Forest Plan Record of Decision require analysis of proposed timber sales. Table 28 lists completed Environmental Assessments and Watershed Analysis for Timber Sales within the Klamath Falls Resource Area. Tables 29-32 display sale history.

## **Forest Development Activities**

Data on Forest Development Activities is displayed in Table 29 (two parts). These data are for contracts awarded after October 1, 1994 and are displayed by fiscal year. Award date does not necessarily match the year the project was completed. Overall, for the first seven years of the KFRA RMP, silvicultural treatments implemented from timber sales, have focused on salvaging drought-related mortality and windthrow, as well as thinning overstocked stands. This forest health-driven prescription has resulted in fewer regeneration cuts than planned, and a reduced need for associated reforestation and development treatments that would follow.

### **Brushfield Conversion**

In the RMP, no conversion acreage was identified for commercial forest lands, and no conversion treatments are expected.

### **Site Preparation**

Accomplishments total 27% of planned levels on the Westside of the resource area, and 10% on the Eastside, which results from the emphasis on thinning for forest health, as opposed to regeneration harvesting.

### **Planting (regular stock)**

Tree planting is 62% of planned levels on the Westside and 68% on the Eastside. Planting is expected to decline over the next three years, again, due to emphasis on thinning.

### **Planting (improved stock)**

No improved stock has been reported used to date. Available stock is sugar pine and white pine, and possibly ponderosa pine and lodgepole pine from private sources. The use of genetically improved stock is expected to be well below planned levels, due having a smaller planting program than planned. Also, recent plantings have been in areas inappropriate for white pine and sugar pine.

### **Vegetation Control**

This includes vegetation control treatments like brush cutting, grass grubbing, and paper mulching of seedlings. For the Westside, treatments are 136% of planned levels, while Eastside treatments completed are also 136% of planned. It is expected that the treatment need may decline over the next three years, returning these treatments to near planned levels for the RMP's first decade.

### **Precommercial Thinning (PCT)**

Treatment levels through FY 2001 are 226% of planned levels on the Westside, and 235% of planned levels on the Eastside. Depending upon funding, Westside PCT treatments could be done at annual levels exceeding planned for the rest of the decade.

### **Reforestation Thinning/Understory Reduction**

These treatments have usually been performed as part of timber sale operations. Westside treatments are 276% of planned, and Eastside treatments are 12% of planned. Treatment needs are expected to continue at approximately planned levels on the Westside, while



Eastside treatments are expected to increase to planned levels, assuming funding will be available.

## Pruning

On the Westside, 75% of planned work has been completed to date, on the Eastside, 0%. The pruning acres are small and can easily be elevated to RMP planned levels under one service contract.

## Fertilization

To date, no fertilization treatments have been implemented on either side of the resource area. The small areas planned for the decade could be done under one service contract. However, current fertilizer prices make fertilization costs prohibitive.

**Table 33. Forest Development Activities**

Activity/ Acres	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	Totals to date	Average Annual	Projected Annual	Accomplish- ments as % of Projected
<b>ENTIRE RESOURCE AREA</b>											
Brushfield Conversion	0	0	0	0	0	0	0	0	0	0	0%
Site preparation	32	0	155	95	69	28	17	396	57	250	23%
Planting (regular stock)	396	210	428	289	141	97	36	1,597	228	360	63%
Planting (improved stock)	0	0	0	0	0	0	0	0	0	115	0%
Vegetation Control	392	370	106	253	314	400	300	2,135	305	225	136%
Precommercial Thinning	0	51	212	141	154	265	297	980	140	70	200%
Restoration Thinning Understory Reduction	412	230	0	1,281	129	419	3,260	5,731	819	440	186%
Pruning	0	0	0	0	43	0	38	81	12	29	41%
Fertilization	0	0	0	0	0	0	0	0	0	32	0%
Reforestation Surveys	3,870	2,970	3,490	3,200	3,500	2,920	2,687	22,637	3,234	0	---
Animal damage control	113	0	904	0	0	0	0	1,017	145	415	35%
Oak woodland thinning	0	0	103	0	173	0	52	328	47	0	---
<b>WESTSIDE</b>											
Brushfield Conversion	0	0	0	0	0	0	0	0	0	0	0%
Site preparation	32	0	120	95	69	28	0	344	49	180	27%
Planting (regular stock)	325	123	373	261	120	74	36	1,312	187	300	62%
Planting (improved stock)	0	0	0	0	0	0	0	0	0	100	0%
Vegetation Control	367	283	106	253	203	400	300	1,912	273	200	136%
Precommercial Thinning	0	51	150	91	154	144	200	790	113	50	226%
Restoration Thinning Understory Reduction	412	230	0	1,281	0	419	3,260	5,602	800	290	276%
Pruning	0	0	0	0	43	0	38	81	12	16	75%
Fertilization	0	0	0	0	0	0	0	0	0	32	0%
Reforestation Surveys	3,300	2,300	2,700	2,500	2,700	2,800	2,550	18,850	2,693	0	---
Animal damage control	88	0	904	0	0	0	0	992	142	400	36%
Oak woodland thinning	0	0	103	0	173	0	52	328	47	0	---
<b>EASTSIDE</b>											
Brushfield conversion	0	0	0	0	0	0	0	0	0	0	0%
Site preparation	0	0	35	0	0	0	17	52	7	70	10%
Planting (regular stock)	71	87	55	28	21	23	0	285	48	60	68%
Planting (improved stock)	0	0	0	0	0	0	0	0	0	15	0%

Table 33 (Continued). Forest Development Activities

Activity/ Acres	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	Totals to date	Average Annual	Projected Annual	Accomplish- ments as % of Projected
<b>EASTSIDE</b>											
Vegetation Control	41	87	0	0	111	0	0	239	34	25	136%
Precommercial Thinning	0	0	50	62	0	121	97	330	47	20	235%
Restoration Thinning Understory Reduction	0	0	0	0	129	0	0	129	18	150	12%
Pruning	0	0	0	0	0	0	0	0	0	13	0%
Fertilization	0	0	0	0	0	0	0	0	0	0	0%
Reforestation Surveys	570	670	790	700	800	120	137	3,787	541	0	---
Animal damage control	25	0	0	0	0	0	0	25	4	15	27%

### Animal Damage Control

On the KFRA, animal damage control is usually porcupine or pocket gopher control. Treatments to date are 36% of planned on the Westside and 27% of planned on the Eastside. Limited regeneration harvests have reduced these treatment needs. Many older plantations are growing in size and are less vulnerable to gopher damage.

Fiscal year 2001 forest development treatments were funded under four service contracts with a total value of \$130,229 (funded by forest development activities), and 902,576 (funded by forest fuels reduction activities) for restoration thinning/Understory reduction projects. These do not include Eastside juniper cutting projects, which totaled \$1,704,236 worth of work under six contracts.

## Special Forest Products

The district sold a variety of special forest products as shown in Table 34. Through the first 7 years of the RMP, the more popular special forest products that the KFRA is selling are firewood, Christmas trees, and boughs. Occasional permits for mushrooms, mosses, and transplants have also been issued. The KFRA has issued 183 permits in FY 2001 for a total receipt value of \$3,618.98. The sale of special forest products follows the guidelines contained in the Oregon/Washington Special Forest Products Procedure Handbook. There are no estimates or projections in the RMP ROD or FEIS that need to be compared to the sold quantities shown.

## Noxious Weeds

The objective of the noxious weed management program in the Klamath Falls Resource Area is to contain or reduce noxious weed infestations using an integrated pest management approach. Integrated pest management includes manual, mechanical, chemical, and biological control methods which are used in accordance with the Klamath Falls Resource Area Integrated Weed Control Plan (IWCP) and Environmental Assessment (EA)(OR-014-93-09), which is tiered to the Northwest Area Noxious Weed Control Program Environmental Impact Statement (EIS) (December 1985) and Supplement (March 1987).



**Table 34. Special Forest Products - Klamath Falls Resource Area**

Product	Westside							Eastside							Combined
	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	Totals	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	Totals	Totals
<b>Boughs-Coniferous (lbs)</b>															
# Of Contracts	0	0	0	0	0	0	0	1	1	0	5	0	0	7	7
Quantity Sold (lbs)	0	0	0	0	0	0	0	0	25,000	0	10,600	0	0	35,600	35,600
Value \$	0	0	0	0	0	0	\$0	\$50	\$1,250	\$0	\$530	0	\$0	\$1,830	\$1,830
<b>Christmas Trees</b>															
# Of Contracts	15	10	36	8	18	56	143	5	0	0	1	1	0	7	150
Quantity Sold (#)	17	12	47	9	21	75	181	5	0	0	1	1	0	7	188
Value \$	\$85	\$60	\$234	\$45	\$105	\$375	\$904	\$25	\$0	\$0	\$4	\$5	\$0	\$34	\$938
<b>Seeds &amp; Seed Cones</b>															
# Of Contracts	0	0	0	1	4	0	5	0	0	0	0	1	4	5	10
Quantity Sold (bushels)	0	0	0	1000	850	0	1850	0	0	0	0	700	500	1200	3050
Value \$	\$0	\$0	\$0	\$50	\$75	\$0	\$125	\$0	\$0	\$0	\$0	\$126	\$96	\$222	\$347
<b>Mosses - Bryophytes</b>															
# Of Contracts	0	0	0	1	0	0	1	0	0	0	0	1	0	1	2
Quantity Sold(lbs)	0	0	0	16	0	0	16	0	0	0	0	20	0	20	36
Value \$	\$0	\$0	\$0	\$14	\$0	\$0	\$14	\$0	\$0	\$0	\$0	\$10	\$0	\$10	\$24
<b>Mushrooms - Fungi</b>															
# Of Contracts	5	2	6	1	17	6	37	3	0	2	0	0	0	5	42
Quantity Sold (lbs)	500	200	600	20	1030	520	2870	750	0	200	0	0	0	950	3820
Value \$	\$50	\$20	\$60	\$8	\$286	\$52	\$476	\$120	\$0	\$20	\$0	\$0	\$0	\$140	\$616
<b>Transplants</b>															
# Of Contracts	1	1	0	0	0	0	2	0	1	0	0	0	0	1	3
Quantity Sold (#)	200	44	0	0	0	0	244	0	500	0	0	0	0	500	744
Value \$	\$20	\$22	\$0	\$0	\$0	\$0	\$42	\$0	\$10	\$0	\$0	\$0	\$0	\$10	\$52
<b>Wood Product/ Firewood</b>															
# Of Contracts	5	6	3	12	31	16	73	27	31	19	58	91	101	327	400
Quantity Sold (cf)	1050	7462	463	2201	10,122	3,342	24,640	6622	10,192	4337	15,078	22,866	31,236	90,331	114,971
Value \$	\$48	\$1,920	\$26	\$111	\$2,689	\$164	\$4,958	\$452	\$1,292	\$254	\$788	\$1,383	\$2,932	\$7,101	\$12,060
<b>Total # of All Contracts</b>	<b>26</b>	<b>19</b>	<b>45</b>	<b>23</b>	<b>70</b>	<b>78</b>	<b>261</b>	<b>36</b>	<b>33</b>	<b>21</b>	<b>64</b>	<b>94</b>	<b>105</b>	<b>353</b>	<b>614</b>
<b>Total \$ of All Contracts</b>	<b>\$203</b>	<b>\$2,022</b>	<b>\$320</b>	<b>\$228</b>	<b>\$3,155</b>	<b>\$591</b>	<b>\$6,519</b>	<b>\$647</b>	<b>\$2,552</b>	<b>\$274</b>	<b>\$1,322</b>	<b>\$1,524</b>	<b>\$3,028</b>	<b>\$9,348</b>	<b>\$15,867</b>

**Resource Area Totals**

Permits		Sales (Dollars - \$)	
Total # Westside	261	Total \$ Westside	\$6,519
Total # Eastside	353	Total \$ Eastside	\$9,348
Total # Contracts	614	Total \$	\$15,867

## Inventories

The Klamath Falls Resource Area continues to survey BLM-administered land for noxious weeds by including noxious weeds in project clearance surveys, and through systematic inventories conducted through contracts. During FY 2001, 20,920 acres were systematically inventoried for noxious weeds. New populations of noxious weed species found included Canada thistle (*Cirsium arvense*), musk thistle (*Carduus nutans*), leafy spurge (*Euphorbia esula*), and Dalmatian toadflax (*Linaria genistifolia* ssp. *dalmatica*).

## Control

Two hundred twenty noxious weed infested sites covering approximately 245 acres of BLM lands were chemically and manually treated by the ODA noxious weed treatment crew supervised by the ODA weed management specialist according to the annual operations plan and resource area priorities. Approximately 30,000 individuals of a flea beetle (*Apthona lacertosa*) were released on BLM lands as a biological control agent for leafy spurge at three sites in the Bryant Mountain area (Table 35).

## Access and Rights-of-Way

Table 2 in the front of this document summarizes some of the various realty actions accomplished in the five years since implementation of the RMP. No amendments to the three existing reciprocal right-of-way agreements were made in FY 2001.

Applications for rights-of-way have been received and processed at a moderate and consistent rate. New authorizations are predominantly for commercial use of existing roads to haul timber and other forest products. Rights-of-way were issued for timber haul roads, communications sites, and power lines.

## Roads

Approximately 520 miles of BLM controlled roads are within the Klamath Falls Resource Area. BLM maintains approximately 50 miles of these roads annually. Additionally, timber sale contracts and road use permits authorize use of BLM roads. In these instances, the road user performs the maintenance.

The resource area is currently developing Transportation Management Objectives (TMOs) for each BLM road. A Transportation Management Plan (TMP) is being developed for Eastside lands and should be completed in the next four years. A TMP was completed for O&C lands west of Highway 97 in 1996. Approximately 75% of the TMOs are completed for the Westside. The TMP will become final when the objectives are completed. If management changes over time, TMOs will also be revised.

During FY 2001, 1.36 miles of roads were closed to vehicle traffic through East Grenada and Bull Springs Timber Sales. Also, 2.42 miles of roads were improved across the Resource Area including 1.80 miles of Gerber recreation roads, 0.50 miles of Topsy Road, and 0.12 miles of Klamath River Stateline Road. Also during FY 2001, Pitchlog bridge received a new surface deck and paint.



**Table 35. Noxious Weed Management Summary**

		FY	FY	FY	FY	FY	FY	FY
		95	96	97	98	99	00	01
Treat-ment	Species							
<b>Manual</b>	<i>Centuarea soltitialis</i> (yellow starthistle)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	<i>Cytisus scoparius</i> (Scotch broom)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	<i>Xanthium spinosum</i> (Spiny clotbur)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	<b>TOTAL</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>
<b>Chemical</b>	<i>Acroptilon repens</i> (Russian knapweed)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	<i>Cardaria draba</i> (hoary cress)	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	<i>Carduus nutans</i> (musk thistle)	35	12	20	32	35	37	38
	<i>Centaurea diffusa</i> (diffuse knapweed)	5	1	2	7	7	7	7
	<i>Centuarea soltitialis</i> (yellow starthistle)	95	40	50	90	95	95	96
	<i>Cirsium arvense</i> (Canada thistle)	5	2	4	14	14	15	16
	<i>Euphorbia esula</i> (leafy spurge)	30	22	30	32	32	32	33
	<i>Hypericum perforatum</i> (common St. John's wort)	0	0	1	1	2	2	2
	<i>Isatis tinctoria</i> (dyer's woad)	0	0	0.1	0.1	0.1	0.1	0.1
	<i>Linaria genistifolia</i> spp. <i>dalmatica</i> (Dalmatian toadflax)	1	1	2	3	5	5	6
	<i>Onopordum acanthium</i> (Scotch thistle)	28	15	22	30	33	34	34
	<i>Salvia aethiopsis</i> (Mediterranean sage)	5	5	5	10	10	10	10
	<i>Senecio jacobaea</i> (tansy ragwort)	2	2	2	2	2	2	2
	<i>Cytisus scoparius</i> (Scotch broom)	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	<b>TOTAL (Numbers Rounded)</b>	<b>207</b>	<b>101</b>	<b>138</b>	<b>222</b>	<b>236</b>	<b>240</b>	<b>245</b>
<b>Biological</b>	<i>Carduus nutans</i> (musk thistle)	0	0	0	0	10	0	0
	<i>Centaurea diffusa</i> (diffuse knapweed)	0	0	0	5	0	0	0
	<i>Centuarea soltitialis</i> (yellow starthistle)	50	50	50	50	0	0	0
	<i>Cirsium arvense</i> (Canada thistle)	0	5	0	0	0	0	0
	<i>Euphorbia esula</i> (leafy spurge)	0	20	0	20	20	10	15
	<i>Linaria genistifolia</i> spp. <i>dalmatica</i> (Dalmatian toadflax)	0	0	0	0	0	5	0
<b>TOTAL</b>		<b>50</b>	<b>70</b>	<b>50</b>	<b>75</b>	<b>30</b>	<b>15</b>	<b>15</b>

**Table 36. KFRA Road Summary Sheet (Entire Resource Area 215,520 Acres)**

RMP Accomplishments By Fiscal Year	Pre-RMP Base Line (Miles)	1995 (Miles)	1996 (Miles)	1997 (Miles)	1998 (Miles)	1999		2000		2001	
						Mi.	Ac.	Mi.	Ac.	Mi.	Ac.
New Construction	NA	0.00	0.00	0.00	0.00	2.20	5.40	3.30	8.00	0.00	0.00
Obliteration/ Decommission	NA	0.00	0.00	0.00	0.00	2.30	4.50	2.70	5.40	0.00	0.00
Closed Roads (Year Round)	NA	0.00	0.00	0.50	0.18	1.80		1.20		1.36	
Closed Roads (Seasonal)	NA	0.00	0.00	0.00	0.00	18.00		0.00		0.00	
Improvements (Miles)	NA	0.00	2.10	0.00	2.20	1.40		3.70		2.42	
Cumulative Accomplishments	Pre-RMP Base Line (Miles)	1995 (Miles)	1996 (Miles)	1997 (Miles)	1998 (Miles)	1999 (Miles)	2000 (Miles)	2001 (Miles)			
Closed Roads (Seasonal)	106.00	106.00	106.00	106.00	106.00	124.00	124.00	124.00			
Closed Roads (Year Round)	87.12	87.12	87.12	87.62	87.80	89.60	90.80	92.16			
Open Roads	323.88	323.88	323.88	323.38	323.20	303.30	302.70	301.34			
Total Roads	517.00	517.00	517.00	517.00	517.00	516.90	517.50	517.50			
Density Status Miles of Rd/Square Miles	Pre-RMP Base Line (Miles/Sq. Mile)	1995 (Miles/Sq. Mile)	1996 (Miles/Sq. Mile)	1997 (Miles/Sq. Mile)	1998 (Miles/Sq. Mile)	1999 (Miles/Sq. Mile)	2000 (Miles/Sq. Mile)	2001 (Miles/Sq. Mile)			
Closed Roads (Seasonal)	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4			
Closed Roads (Year Round)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
Open Roads	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9			
Total Density	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5			
RMP Accomplishments 1995-2001		Westside		Eastside		Entire Resource Area					
Activity		Mi.	Ac.	Mi.	Ac.	Mi.	Ac.	Mi.	Ac.	Mi.	Ac.
New Construction		3.40	8.30	2.10	5.10	5.50		13.40			
Obliteration/ Decommission		3.90	7.80	1.10	2.10	5.00		9.90			
Closed Roads (Year Round)			4.56		0.48			5.04			
Closed Roads (Seasonal)			0.00		18.00			18.00			
Improvements (Miles)			9.12		2.70			11.82			

**Table 36. (Cont.) KFRA Road Summary Sheet (Westside 51,193 Acres)**

RMP Accomplishments By Fiscal Year	Pre-RMP Base Line (Miles)	1995 (Miles)	1996 (Miles)	1997 (Miles)	1998 (Miles)	1999		2000		2001	
						Mi.	Ac.	Mi.	Ac.	Mi.	Ac.
New Construction	NA	0.00	0.00	0.00	0.00	2.20	5.40	1.20	2.90	0.00	0.00
Obliteration/ Decommission	NA	0.00	0.00	0.00	0.00	2.30	4.50	1.60	3.30	0.00	0.00
Closed Roads (Year Round)	NA	0.00	0.00	0.50	0.18	1.80		1.20		0.88	
Closed Roads (Seasonal)	NA	0.00	0.00	0.00	0.00	0.00		0.00		0.00	
Improvements (Miles)	NA	0.00	2.10	0.00	1.70	1.40		3.30		0.62	



**Table 36. (Cont.) KFRA Road Summary Sheet (Westside 51,193 Acres)**

Cumulative Accomplishments	Pre-RMP Base Line (Miles)	1995 (Miles)	1996 (Miles)	1997 (Miles)	1998 (Miles)	1999 (Miles)	2000 (Miles)	2001 (Miles)
Closed Roads (Seasonal)	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00
Closed Roads (Year Round)	87.12	87.12	87.12	87.62	87.80	89.60	90.80	91.68
Open Roads	152.88	152.88	152.88	152.38	152.20	150.30	148.70	147.82
Total Roads	288.00	288.00	288.00	288.00	288.00	287.90	287.50	287.50
Density Status Miles of Rd/Square Miles	Pre-RMP Base Line (Miles/Sq. Mile)	1995 (Miles/Sq. Mile)	1996 (Miles/Sq. Mile)	1997 (Miles/Sq. Mile)	1998 (Miles/Sq. Mile)	1999 (Miles/Sq. Mile)	2000 (Miles/Sq. Mile)	2001 (Miles/Sq. Mile)
Closed Roads (Seasonal)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Closed Roads (Year Round)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Open Roads	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8
Total Density	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6

**Table 36. (Cont.) KFRA Road Summary Sheet (Eastside 164,327 Acres)**

RMP Accomplishments By Fiscal Year	Pre-RMP Base Line (Miles)	1995 (Miles)	1996 (Miles)	1997 (Miles)	1998 (Miles)	1999		2000		2001	
						Mi.	Ac.	Mi.	Ac.	Mi.	Ac.
New Construction	NA	0.00	0.00	0.00	0.00	0.00	0.00	2.10	5.10	0.00	0.00
Obliteration/Decommission	NA	0.00	0.00	0.00	0.00	0.00	0.00	1.10	2.10	0.00	0.00
Closed Roads (Year Round)	NA	0.00	0.00	0.00	0.00	0.00		0.00		0.48	
Closed Roads (Seasonal)	NA	0.00	0.00	0.00	0.00	18.00		0.00		0.00	
Improvements (Miles)	NA	0.00	0.00	0.00	0.50	0.00		0.40		1.80	
Cumulative Accomplishments	Pre-RMP Base Line (Miles)	1995 (Miles)	1996 (Miles)	1997 (Miles)	1998 (Miles)	1999 (Miles)		2000 (Miles)		2001 (Miles)	
Closed Roads (Seasonal)	58.00	58.00	58.00	58.00	58.00	76.00		76.00		76.00	
Closed Roads (Year Round)	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.48	
Open Roads	171.00	171.00	171.00	171.00	171.00	153.00		154.00		153.52	
Total Roads	229.00	229.00	229.00	229.00	229.00	229.00		230.00		230.00	
Density Status Miles of Rd/Square Miles	Pre-RMP Base Line (Miles/Sq. Mile)	1995 (Miles/Sq. Mile)	1996 (Miles/Sq. Mile)	1997 (Miles/Sq. Mile)	1998 (Miles/Sq. Mile)	1999 (Miles/Sq. Mile)		2000 (Miles/Sq. Mile)		2001 (Miles/Sq. Mile)	
Closed Roads (Seasonal)	0.2	0.2	0.2	0.2	0.2	0.3		0.3		0.3	
Closed Roads (Year Round)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	
Open Roads	0.7	0.7	0.7	0.7	0.7	0.6		0.6		0.6	
Total Density	0.9	0.9	0.9	0.9	0.9	0.9		0.9		0.9	

## **Energy and Minerals**

There were no mining plans of operations or mining or energy notices submitted during FY 2001. There are no leases of oil, gas or geothermal resources within the Klamath Falls Resource Area, although there are several known geothermal resource areas and most of the public lands are prospectively valuable for oil and gas. No new mining claims were filed in FY 2001. In FY 2001, the resource area sold 500 cubic yards of volcanic cinders to individuals and provided 26,000 cubic yards of rock free of charge to local governments.

## **Land Tenure Adjustments**

Since completion of the RMP, 1,760 acres have been sold. The land was sold to offset losses to Klamath County's tax base that resulted from the Wood River acquisition. Currently, 960 acres of public land are being evaluated for sale.

Since the RMP was completed, 1,160 acres have been evaluated for sale, and disposal may be accomplished only by exchange. An additional 5,640 acres have been evaluated for sale but will be retained in Federal ownership. Resource values, including, but not limited to, wildlife habitat, timber, and cultural resources found on these lands justify retention in public ownership. In the plan amendment, Appendix I was updated to reflect the work accomplished over the past 4 years in evaluating public lands for sale or exchange.

Public Law 105-321 requires that, when selling, purchasing and exchanging land, the Bureau of Land Management may neither, 1) reduce the total acres of O&C, CBWR and Public Domain lands, nor, 2) reduce the number of O&C, CBWR, and PD lands that are available for timber harvest below what existed on October 30, 1998. To date we have sold 30 acres of public domain timberland.

An amendment to the RMP on Unintentional Encroachments and Survey Hiatuses was completed in FY 99. The plan amendment allowed a 1.62-acre tract of land to be moved from Land Tenure Zone 1 to Land Tenure Zone 3, which allows for sale. The amendment added the following provision to the Land Tenure Adjustment - Management Actions/Direction for All Land Use Allocations section:

"Where survey hiatuses and unintentional encroachments on public lands are discovered in the future that meet disposal criteria, the lands may be automatically assigned to Zone 3 for disposal."

The disposal criteria to be used are those defined in Appendix I of the Klamath Falls Resource Area Record of Decision and Resource Management Plan, June 1995.

## **Hazardous Materials**

No new hazardous waste sites have been discovered. Unauthorized dumping of household trash on public lands continues to increase. The residents of Bly, Oregon conducted a major cleanup of the public lands near the town of Bly Oregon.



# **Coordination and Consultation**

## **Federal Agencies**

During the period of June 1995 through September 2000, BLM has increased its cooperative efforts with other federal agencies. The BLM has been very involved with the U.S. Fish and Wildlife Service, U.S. Forest Service, Environmental Protection Agency, U.S. Geological Survey, Bureau of Reclamation, and National Resource Conservation Service on projects such as watershed analysis, water quality improvement projects, and the Wood River Wetlands Restoration Project. In addition, personnel from these agencies have been involved in planning, conflict resolution, and Section 7 consultation under the Endangered Species Act.

The Regional Interagency Executive Committee, Klamath Provincial Advisory Committee, Klamath Basin Ecosystem Restoration Office, and the Regional Ecosystem Office, established under the Northwest Forest Plan, have increased BLM's interagency role as well.

### **U.S. Fish and Wildlife Service / Bear Valley National Wildlife Refuge**

The first forest health treatment in the Bear Valley National Wildlife Refuge was completed in November of 1999. The first treatment was a 245 acre timber sale that focused primarily on maintaining and improving bald eagle nesting and roosting habitat. The treatment consisted of thinning primarily the overstocked understory trees to improve the resiliency of the remaining trees and reduce the risk of stand replacing wildfires. The first followup prescribed burn was implemented in the fall of 1999 in areas that had been harvested to reduce remaining fuel loads. In addition to the habitat treatments, some road improvements and road decommissioning occurred along with replacement of an access bridge. A second treatment in the refuge is scheduled for 2002. The USF&WS and the BLM, through a memorandum of understanding, have shared specialists to complete both restoration work in the refuge as well as wetland restoration work at Wood River.

### **Klamath Basin Ecosystem Restoration Office**

The Ecosystem Restoration Office (ERO) is an interagency office, which is operated cooperatively by the U.S. Fish and Wildlife Service, Bureau of Reclamation, U.S. Forest Service and the BLM. This interagency office provides funding, technical assistance, and monitoring for watershed restoration projects which are proposed by private landowners, private and public organizations and agencies, and the Upper Klamath Basin Working Group. The ERO works closely with the Klamath Basin Provincial Advisory Committee and watershed councils within the Klamath Basin. BLM has helped support this office since 1997.

## **State of Oregon**

The Klamath Falls Resource Area has continued its long term working relationship with Oregon Department of Forestry, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture, Oregon Parks and Recreation Department, State Historic Preservation Office, and the Oregon Department of Environmental Quality. BLM has participated with these agencies in diverse activities such as recreation and timber sale planning, fish habitat inventory, water quality monitoring and TMDL development, noxious weed management, hazardous material cleanup, air quality maintenance, and wildfire suppression.

## Counties

The Klamath Falls Resource Area (KFRA) is located within Klamath County. There is frequent communication between the KFRA and county commissioners and other county staff. This communication involves BLM proposed projects, county projects that may affect county lands, water quality issues, noxious weed issues, and other issues. County Commissioners receive copies of all major publications, project updates and project proposals.

## Cities

The KFRA works with City of Klamath Falls staff in the areas where BLM lands adjoin to city limits. Four Klamath Falls Resource Area personnel who are attending a ten month long Leadership Klamath 2000 training which gives participants an overview of the history, workings, and interrelationships of city and county government and reviews services and relationships to private, state, and federal agencies.

## Tribes

Tribes are represented on the Southeast Oregon Provincial Interagency Executive Committee, which coordinates activities within the province. The KFRA contacts the Klamath Tribes directly for coordination of many projects by presenting projects to the Tribal Council and by meeting bi-monthly with the Klamath Tribes Culture and Heritage Department. The Lakeview District is in the process of developing a Memorandum of Understanding (MOU) between the BLM and the Klamath Tribes. It is anticipated the MOU will be finalized in FY 2003. As mentioned above, the BLM is working with numerous tribes on FERC relicensing and development of the Klamath River Management Plan.

## Watershed Councils

There is ongoing participation with the Klamath Watershed Council and associated Working Groups. The BLM is represented on the Councils' Technical Advisory Committee and participates in cooperative activities that can benefit public lands. The council is active in coordinating watershed and water quality enhancement projects on private lands.

### Upper Klamath Basin Working Group

The BLM is also involved in the Upper Klamath Basin Working Group. The working group was appointed by Senator Mark Hatfield in 1995 and authorized by Congress under the Oregon Resource Conservation Act. The senator's charge for the group was to identify short and long term solutions to issues in the Upper Klamath basin. Specifically he asked the group to address:

- Ecosystem restoration and water quality
- Economic stability
- Reducing drought impacts

The working group was designed to be citizen-led. Two non-agency members serve as co-chairs. The membership totals 33, including representatives from — the Klamath Tribes (3 members), the city of Klamath Falls, Klamath County, Oregon State government (2 members), the Soil and Water Conservation district, Oregon Institute of Technology, the environmental community (4 members including a California representative with refuge interests), local businesses (4 members including the wood products industry and commercial and recreational fisheries), the ranching and farming community (4 members), and the local



community (4 members). In addition, there are representatives from eight federal agencies – U.S. Fish and Wildlife Service, the Bureau of Reclamation, the Bureau of Land Management, the Bureau of Indian Affairs, the U.S. Forest Service, the Natural Resource Conservation Service, and the national Marine Fisheries Service.

The working group meets regularly to address issues, and propose and seek out grants for projects that promote ecosystem restoration.

## **Other Local Coordination and Cooperation**

### **Klamath-Lake Forest Health Partnership**

A partnership was created in 1995 to promote forest health in Klamath and Lake Counties. This included private industrial and non-industrial landowners, The Nature Conservancy, Chiloquin Visions in Progress, Klamath Ecosystem Education Partnership, consulting foresters, county, state, and federal agencies who work together on problem solving, sharing science and information, and providing assistance to small woodland owners. The KFRA is a member of this active partnership that meets monthly.

### **Klamath-Lake-Modoc-Siskiyou Outdoor Recreation Working Group**

This working group was formed in 1991. This is a multi-county organization, which covers portions of southern Oregon and northern California. This working group provides a forum where private businesses, city, county, state, and federal agencies communicate, plan, and implement recreational and tourism activities. BLM is an active participant.

Major accomplishments have been the development of 19 outdoor recreation brochures, the construction of 50 highway rest stop displays in locations in California and Oregon, and provide tear off sheet maps that highlight outdoor recreational activities. The brochures and tear sheet maps are used in motels, restaurants, and other business to promote outdoor recreation and tourism in the four-county area. Representatives from this group also meet quarterly with the county commissioners from each county to share information and receive new ideas.

### **Klamath Basin Water Adjudication Resolution Process**

The Oregon Water Resources Department (OWRD) initiated the Klamath Basin Adjudication in 1975. The Klamath Adjudication is an Oregon general water claim adjudication in which the final decree will be issued by the Klamath County Circuit Court. All Adjudication claims were filed with the OWRD by April 1997. The Adjudication is the first Oregon general water adjudication in which complex federal claims have been filed.

Given the complexity of the Adjudication and other water allocation issues in the Klamath Basin, the OWRD has initiated a voluntary alternative dispute resolution process to provide a forum to address Adjudication claim issues and other matters related to water supply and demand in the Klamath Basin. The BLM is an active participant in the adjudication process.

### **Coordinated Resource Management Plans (CRMP)**

Coordinated resource management planning involves resource owners, managers, users, and specialists, concurrently formulating and implementing plans for the management and use of all natural resources and ownerships within a specific area. The group established through the planning effort provides a forum to help resolve resource conflicts. The KFRA is involved in three Coordinated Resource Management Planning areas: the Yainax, Spencer Creek, Rock Creek and Gerber-Willow Valley areas.

### **Yainax CRMP**

The Yainax Butte CRMP was originally completed in 1974 in conjunction with the United States Forest Service (USFS), Oregon Department of Fish and Wildlife (ODFW), Oregon Department of State Lands (ODSL), Oregon Department of Transportation (ODOT), Klamath County Extension Service, Natural Resource Conservation Service (NRCS), Weyerhaeuser, and the common grazing permittee. In 1993, the plan was completely revised with the same group of organizations and a new grazing permittee. The revised plan is still in effect and being followed by the current grazing permittee (different than in 1993) and the successor to Weyerhaeuser - U. S. Timberlands. The Yainax Butte CRMP addressed a myriad of issues including grazing, forestry, recreation, wildlife, T&E species, private land and cultural issues. The CRMP directs the management of the area to accomplish a broad range of resource goals and uses.

### **Spencer Creek CRMP**

This CRMP was developed in 1990 and was updated in 1994. The planning group is made up of county, state, and federal agency personnel and private landowners who coordinate watershed enhancement and other projects within the Spencer Creek Watershed.

### **Rock Creek CRMP**

The BLM's Rock Creek allotment is included in the broader Warm Springs Coordinated Allotment Management Plan. This plan was originally completed in 1983 with the Modoc National Forest (NF), Fremont National Forest, and the common permittee, and establishes resource objectives and institutes a grazing system to address the resource issues. The Warm Springs Coordinated Plan is in the process of being revised with the Modoc NF taking the lead, as they are the majority land administrator.

### **Gerber/Willow Valley CRMP**

Development of this plan began in the fall of 1999 (FY 2000). The first objective is to complete a joint watershed analysis on two 5<sup>th</sup> field watersheds (Gerber and Willow Valley) with BLM, Forest Service and private landowners participating. Federal agencies involved are the Klamath Falls Resource Area, Fremont National Forest, and Modoc National Forest (California). Following completion of the watershed analysis, a coordinated resource management plan will be developed to include concerns and opportunities that adjacent private landowners have for improving their lands within the analysis area boundary. The CRMP process is just in the very early stages.

### **Pokegama Working Group**

This working group was formed in 1991 to coordinate projects to improve habitat in big-game winter range and reduce harassment of wildlife during critical winter months. This group has been active in informing and educating the public of the critical habitat needs for deer and elk. Members of this group include US Timberlands, PacifiCorp, Oregon Department of Fish and Wildlife and the BLM.

### **Intermountain West Joint Venture (IWJV)**

The IWJV was formed in 1995 and covers eastern Oregon and parts of nine other western states. This group meets quarterly and is in the process of writing an area plan with input by local Federal and State agencies, and private organizations to determine conditions of wetlands and identify opportunities to improve habitat. Oregon Wetlands Group hired a private consultant to write the plan (in development) that will focus on the Klamath Basin eco-region. This plan, as well as other eco-region plans within the ten western states, is following the guidelines outlined under the North American Wetlands Conservation Act of 1989. The representatives for the Klamath Basin eco-region are BLM, Ducks Unlimited, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Modoc National Forest, California Fish and Game, and Oregon Joint Venture. The plan, to include wetland restoration projects, is expected to be completed within two years. Wood River Wetland restoration is part of the Plan.



# Third Year Evaluation

On July 31, 2001, the Oregon/Washington State Director, Bureau of Land Management (BLM), released the following findings based on the Third Year Plan Evaluation for the Lakeview District (Klamath Falls Resource Area). The period evaluated was 1995 - 1998.

“Based on this plan evaluation which included information through Fiscal Year 1998, I find that the Klamath Falls Resource Area RMP goals and objectives are being met or are likely to be met, and that the environmental consequences of the plan are similar to those anticipated in the RMP FEIS, and that there is no new information, as of September 30, 1998, that would substantively alter the RMP conclusions. Therefore, a plan amendment or plan revision of the RMP is not warranted. This document meets the requirements for a plan evaluation as provided in 43 CFR 1610.4-9.”

An executive summary and the entire evaluation document are available, free of charge, upon request, or is accessible “on-line” at the Lakeview District (Klamath Falls Resource Area) website: <http://www.or.blm.gov/Lakeview/kfra/index.htm>.

## Research and Education

### Research

Several research projects were active on the Klamath Falls Resource Area during FY 2001. These include:

#### Red-root Yampa

Recent field and laboratory work conducted for BLM and Forest Service has identified populations of *Perideridia* from Klamath and Jackson Counties that are potentially distinct and undescribed. These populations, previously assigned to *P. erythrorhiza*, comprise a distinct unit distributed from the northwest shore of Klamath Lake SW to the Howard Prairie Lake area, approximately 25 miles away. A DNA evaluation of the *P. erythrorhiza* complex to compliment previous morphological and ecological data, is being conducted in Corvallis, including use of fresh samples of all populations for DNA extraction and multiplication of the extracted DNA. This evaluation will provide suitable molecular data that will assist in determining the taxonomic placement and rank of the new taxon. Such a new taxon would represent a limited endemic and one of the rarest and most sensitive members of the genus, and a potentially endangered species on public lands.

#### Bald Eagle Roosting

Roosting success of bald eagles in response to silvicultural treatments. Data on roosting success are being collected in areas treated to thin the forest understory to promote maintenance and recruitment of large roost trees, and in areas left untreated (control). Three years of pre-treatment data were collected and one year of post treatment data has been collected.

#### Neotropical Birds

A study of Neotropical migratory birds is being conducted in cooperation with Klamath Bird Observatory, Pacific Southwest Research, PacifiCorp, Winema National Forest, and Point Reyes Bird Observatory. On BLM lands, there are 195 point-count stations and four constant effort mist-netting sites in a variety of habitats.

## **Yellow Rails**

An ongoing research project on yellow rails has collected data on the populations of yellow rails at the Four Mile Creek Wetland and the Wood River Wetland to serve as a baseline for an assessment of population trends. Valuable information on site fidelity, habitat needs, and potential life span has been collected.

## **Prescribed Fire**

The BLM plans to initiate a prescribed burn adjacent to the Old Baldy RNA, which is administered jointly by the BLM Klamath Falls Resource Area (Lakeview District) and Ashland Resource Area (Medford District). The fire will be allowed to burn into the Old Baldy RNA. Prescribed fire effects monitoring plots were established in FY 99 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program (ONHP). Re-surveys will be conducted in mid- to late summer of 2001, 2002 and 2005, after the planned spring 2001 ignitions. Analysis will describe changes in cover and frequency of species, fuel loading, and the organic soil layers.

# **Education**

## **Outreach**

In FY 2001, the Klamath Falls Resource Area was very active in participating in environmental education programs in the surrounding community. KFRA employees presented programs to approximately four hundred fifty students at twelve different schools. The focus of the programs included archeology, forestry, wetland biology, wildlife biology, rangeland ecology and careers in natural resources. Students ranged in age from first graders to college students. Three hundred students visited Wood River wetland to learn about wetland form and function and used Wood River wetland as an outdoor classroom. BLM also participated in several specific activities throughout the county, which are listed below. Table 37, summarizes the participation in these activities.

Each year the Resource Area hires 2-3 Apprentice in Science and Engineering students from the local high school. The program is designed to introduce sophomore and junior students to the natural resource management profession. In FY 2002 two students were hired; one to work in forestry and one to work in the archaeology field.

### **Annual Horse Packing & Wilderness Skills Clinic/BLM Wild Horse Adoption**

In 2001, a wild horse and burro adoption event was again held at the clinic. This is the 3<sup>rd</sup> time a satellite adoption was held at the packing clinic, the others being in 1998 and 1999. Of the 31 horses and 13 burros available for adoption in 2001, 16 horses and 10 burros were actually adopted through the competitive bid process. The average successful bid was \$170, with a high bid of \$575 for one of the horses. The next Packing Clinic adoption is scheduled for May of 2003.

### **Annual International Migratory Bird Day Celebration**

The Klamath Falls Field Office was the primary sponsor of an International Migratory Bird Day (IMBD) event held in Klamath Falls, Oregon. IMBD is the hallmark outreach event for Partners in Flight, which focuses on migratory birds. Other sponsors in the local event included the U.S. Fish and Wildlife Service, Klamath Community College, and community volunteers. The main outreach event included educational talks, several photographic displays, a variety of educational activities for children, and participation from community organizations.

Other educational efforts intended to complement the IMBD included a teacher's workshop on migratory birds. BLM personnel helped organize this workshop, which was sponsored by the Oregon State University Extension Service. BLM participation included presentations on bird migration, bird habitat management, and bird biology. In addition, BLM teamed up with the local community college to have classes offered on various subjects related to birds.



### **13<sup>th</sup> Annual Horse Packing & Wilderness Skills Clinic/BLM Wild Horse Adoption**

This two day clinic, held at the Klamath County Fairgrounds in May, presents proper animal packing techniques and valuable low-impact camping techniques. This clinic is free of charge and is open to the general public. The BLM provided resource specialists, who answered questions regarding recreational opportunities on nearby public lands. The highlight of the event was the BLM's successful wild horse adoption. Animals and support were provided by the BLM's Burns District, with additional help from the Medford District. Twenty-one horses were successfully adopted through a competitive bid process. This event was very well attended, with nearly 3000 registered visitors. No horses were adopted out at this event in 2000, but 35 horses and 6 burros will be up for adoption in 2001.

### **1<sup>st</sup> Annual International Migratory Bird Day Celebration**

International Migratory Bird Day is celebrated world-wide and is an event to educate people about the marvels of bird migration, issues facing songbirds, and what the people can do to help. Locally, the Klamath Falls Resource Area, in cooperation with USFWS and community volunteers, organized and sponsored a Saturday family event (5/6/00) at Moore Park. Approximately 300 people attended of all ages.

**Klamath County Foster Children Fishing Day** Klamath County Foster Children Fishing Day Klamath Falls Resource Area works with the Oregon State Office for Services to Children and Families to provide a Free Fishing Day for foster children living in Klamath and Lake Counties. The event is a part of National Fishing Week and takes place at the Keno Recreation Park. There are activities the night before the event hosted by the local chapter of girl scouts. Approximately 100 foster children and their families participate in this event.

### **RAP (Resources and People) Career Camp**

This camp is designed to inform students (ages 15-18) and educators about natural resource management and careers working with natural resources. The camp is one week long (June 18-22, 2001) and several agencies participate in the event including, KFRA, Winema NF, Modoc NF and various private organizations.

### **Forestry School Tour**

The event, held at the Clover Creek Environmental Education Area, is targeted at sixth graders from schools all over Klamath County. Children learn about forest products, reforestation, tree identification, soil and water conservation, fire, wildlife and outdoor recreation. It is a three-day event and about 80 students participate each day. There are a number of agencies that participate in this event, including BLM, USFWS, USFS, ODFW, ODF and several private and county groups. The event is sponsored by the OSU Extension Services office.

### **Celebrating Wildflowers Photo Contest**

This interagency event is sponsored by the BLM, USFS, NPS, USFWS and the Klamath Basin Chapter of the Native Plant Society of Oregon (NPSO). Each year a wide variety of photographs are submitted by amateur photographers. The photographs are judged by a panel of local photography and wildflower enthusiasts from the public, and state and federal agencies. Prizes are awarded. Photographs of all the entries are displayed in the participating agency offices. From stunning close-ups to beautiful panoramic views, this traveling display highlights native wildflowers across the west.

### **Wild Horse & Burro Adoption Program at the Klamath County Fair**

This successful event has been a mainstay at the Klamath County Fair since 1994. In the earlier years, the "fair horse" was raffled with free tickets to anyone who met the BLM requirements for adoption. During the last 3 years, the horse adoption has offered an exciting new element. The BLM, working in conjunction with the 4-H Equestrian Club and the Future Farmers of America, have sold raffle tickets for \$5 each. The proceeds go towards a scholarship fund that is awarded to a local member of one of the participatory groups.

### **Autonomous Mutant Festival**

The Autonomous Mutant Festival is an "autonomous space of creativity, communication and education for people who otherwise don't have a forum, either in the mainstream culture, or in the far left end of the social spectrum", per an unofficial organizer for the event. Most of the participants were in groups, which they call tribes. Some of the tribes were from Wisconsin,



San Francisco, Seattle, Eugene, Portland, and some foreign countries. The tribes had activists, teachers, spiritual healers, satan worshipers, anarchists, and whatever you can imagine along with a few ordinary folks.

The 5<sup>th</sup> Annual Mutant Festival took place from Monday, August 13<sup>th</sup> to Monday, August 20<sup>th</sup>, 2001. The festival organizers chose Barnes Valley Creek because of the proximity to water, the beauty, and isolation. Organizers told BLM employees that there were other sites considered near Christmas Valley and Lakeview, Oregon for the 2001 Festival. The past festival locations have been in western Oregon, near Eugene and Roseburg. This was the first festival location east of the Cascade Mountain Range.

BLM was not notified by Festival organizers, nor did they seek support or a permit. The Lakeview District learned about the Festival from the Oregon State Office BLM Law Enforcement. They faxed a flyer announcing the Festival to Klamath Falls Resource Area BLM Ranger. The number of participants was around 250 people per day. This is considerably lower attendance than past festivals in other locations, which ranged from 700-2,000 people per day. The lower numbers were attributed, by the planners, to lack of planning, poor maps, and long distance from support groups (i.e., food co-ops) typical of past festival sites.

Since this was an unexpected and unplanned event, BLM's management strategy for outreach to this group focused on keeping the Mutant Festival participants at the site they selected. The BLM provided frequent law enforcement patrols, staged a fire strike team nearby, provided a BLM manager (incident commander) on site, and worked to keep the local ranchers (adjacent to the Festival site) and nearby town of Bonanza merchants informed. The festival participants cooperated with BLM. There were few impacts to natural resources, and there were no major incidents.



**Figure 15. Fence Building During Public Lands Day**



### **Public Lands Day**

On September 22, 2001 the Resource Area celebrated National Public Lands Day.

Approximately 50 people from communities surrounding Gerber Reservoir plus 15 employees came to participate in tree planting, buck-and-pole fence building, and trash cleanup around Gerber Campground and Reservoir.



**Figure 16. Public Lands Day Stream Improvement**



**Figure 17. Public Lands Day Volunteers of All Ages**



**Table 37. Klamath Falls Resource Area Education Program FY 2001**

Event/Activity	Date	Location	# of Public Participants
<b>Special Events</b>			
6th Annual Celebrating Wildflowers Photography Contest	3/01- 6/01	Klamath Basin - (In cooperation with other local agencies)	21 entrants
Earth Day	4/21/01	Jefferson Square Mall	~250 people
Packing Clinic	5/4/01-5/6/01	Klamath Co. Fairgrounds	~2000 people
International Migratory Bird Day	5/12/01	Klamath Community College	~300 people
Fishing Day	6/2/01	Gerber	100 kids
RAP Camp	6/17/01-6/23/01	Lake of the Woods	55 students and 10 teachers
Klamath County Fair Booth	8/9/01-8/12/01	Klamath Co. Fairgrounds	~2000 people
Lake County Fair Booth	8/31/01-9/2/01	Lake Co. Fairgrounds	~1000 people
National Public Lands Day	9/22/01	Gerber Reservoir	64 people
<b>Presentations/Environmental Education Programs/Tours</b>			
Spencer CRMP	2/5/01	Keno Elem.	12 Upper Klamath Working Group
"Expanding Your Horizons"	3/19/01	OIT	55 Eighth grade girls
"Expanding Your Horizons"	3/20/01	OIT	55 Eighth grade girls
"Expanding Your Horizons"	3/21/01	OIT	60 Eighth grade girls
Wetlands Field Day	5/14/01	Wood River	40 First graders (Chiloquin Elem.)
Wetland Biology	5/16/01	Wood River	30 Tulelake High School Students
Wood River Wetland	5/16/01	Wood River	40 adults, Extension Agent Tour
Wetlands Field Day	6/1/01	Running Y Resort	120 students - 5th & 6th graders
Link River Nature Walk Prep.	6/4/01	Pelican Elem.	50 students- 4th & 5th graders
Nature Walk	6/5/01	Link River	50 students - 4th & 5th graders
Wetlands Field Day	6/12/01	Wood River	60 students - 3rd graders
Wood River Wetland	7/12/01	Wood River	35 adults (CA Biologists)
Wood River Wetland	7/23/01	Wood River	7 KLETI Residents, ages 14-18
Public Land Use and Access	8/4/01	Keno Sportsmen's Park	75 kids 8-15 yrs old (youth hunters)
Annual Mutant Festival	8/13-20/01	Barnes Valley Creek, Gerber Reservoir	Approximately 250 people per day
Wood River Wetland	8/7/01	Wood River	16 people - 6-18 yrs old
Pronghorn Biology	8/17/01	Gerber	15 kids - OHA Youth Hunters
Wood River Management	8/24/01	Wood River	16 people - 6-18 yrs old
Entomology Presentation	9/12/01	Mills Elem.	28 students - 5th graders
Wood River Wetland	9/26/01	Wood River	20 Henley Middle School Students



# **Information Resource Management**

The ability to accomplish complex management of diverse resources over 215,000 acres requires enormous amounts of information. In order to accomplish this management in an efficient manner, the Klamath Falls Resource Area employs up to date electronic office and geographic information system (GIS) hardware and software. There have been several recent major accomplishments concerning information resource management.

There has been a significant continuing effort to upgrade software and hardware with the goal of simplifying work and increasing capability to accomplish complex analysis of large amounts of data. The Klamath Falls Resource Area goal is to place appropriate technology and training in the hands of employees and decision makers to increase efficiency and effectiveness.

## **Geographic Information System**

The BLM in western Oregon made a substantial investment in building a geographic information system (GIS) as it developed the resource management plans (RMPs). This information system has allowed the BLM to organize and standardize basic resource data across Oregon. The GIS has now become a day-to-day tool in resource management that allows display and analysis of complex resource issues in a fast and efficient manner. BLM is now actively updating and enhancing the resource data as conditions change and further field information is gathered. The GIS plays a fundamental role in ecosystem management and planning by allowing the BLM to track constantly changing conditions, analyze complex resource relationships, and take an organized approach for managing resource data.

## **Internet Web Site**

The Klamath Falls Resource Area places information about the resource area on an Internet site at [www.or.blm.gov/Lakeview/kfra/](http://www.or.blm.gov/Lakeview/kfra/). Information on Plan Updates, Land Use Plans, Plan Amendments, Northwest Forest Plan Monitoring, Quarterly Project Reports, and individual specific resource disciplines, such as watershed and landscape analyses, recreation opportunities, riparian, wildlife, fisheries, grazing, wild horses, engineering, botany, forestry, fire, lands, cultural resources, law enforcement, and silviculture are available on the web page.

# **Cadastral Survey**

The Oregon State BLM office provides cadastral support to the resource area. One cadastral survey conducted by surveyors of the Winema National Forest following instructions provided the Cadastral Survey branch of the Oregon State Office. The survey began in FY 2001 and is scheduled for completion in FY 2002. The survey created a two government lots that will facilitate the sale of public lands to resolve an unintentional encroachment.

# **Law Enforcement**

The Klamath Falls Resource Area has a full time BLM Ranger along with the services of a Klamath County Deputy Sheriff (through a law enforcement agreement with Klamath County) for law enforcement duties. The Ranger works cooperatively with the Lakeview BLM District Ranger, Oregon State Police, Lake County Sheriff's Office, Lakeview and Klamath Falls Police Departments, National Park Service, and the U.S. Forest Service. Investigative support is provided by BLM Special Agents from the Oregon State Office.

Law enforcement efforts are focused on protecting natural resources and property while providing for public and employee safety. Educating the public in the safe and proper use of public lands is accomplished by patrol, investigation of criminal activity, issuance of verbal or written citations, and making arrests where appropriate.

There were 60 incidents and violations recorded in the Klamath Falls Resource Area in 2001 (see Table 38). These included employee harassment, theft of Federal property, forest products theft, vandalism to public or private property, Archaeological Resource Protection Act (ARPA) violations, weapons violations, search and rescue, human-caused wildfire, camping or day-use violations, vehicle abandonment and improper disposal of household trash. The table below summarizes the law enforcement activity within the Klamath Falls Resource Area since 1995. The decrease in violations for 2001 is due to reduced law enforcement coverage of BLM lands due to personnel changes/retirement and the detailing of Rangers to National Security issues.

# National Environmental Policy Act Analysis and Documentation

## NEPA documentation

The review of the environmental effects of a proposed management action can occur in any of four ways: administrative determination, categorical exclusion, environmental assessment, or environmental impact statement.

An administrative determination is made when NEPA documentation previously prepared by the BLM fully covers a proposed action and no additional analysis is needed. This procedure is often used in conjunction with a plan conformance determination. If a proposed action is fully in conformance with actions specifically described in the RMP and analyzed in the RMP/FEIS, a plan conformance determination may be made and no additional analysis is needed. This determination is documented in a "*Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)*".

**Table 38. Law Enforcement Activity**

Fiscal Year	Incidents or Violations	Warnings Issued	Citations Issued
1995	36	unknown	unknown
1996	42	unknown	unknown
1997	34	9	1
1998	33	22	2 arrests, 1 grand jury indictment
1999	66	50	2
2000	91	65	1
2001	60	42	14



Some projects may qualify for a categorical exclusion from further NEPA documentation. Numerous types of projects have been determined that the nature and scope of the proposed activities do not individually or cumulatively have significant environmental effects on the environment. Specific categories of projects may therefore be exempt from requirements to prepare an environmental analysis. Categorical exclusions (CX) are covered specifically by Department of Interior and BLM guidelines.

An environmental assessment (EA) is prepared to assess the effects of actions that are not exempt from NEPA, are not categorically excluded, and are not covered by an existing environmental document. An EA is prepared to determine if a proposed action or alternative will significantly affect the quality of the human environment.

Major proposals that will significantly affect the environment, and that have not been previously analyzed through an environmental impact statement (EIS), require that an EIS be prepared.

## **Klamath Falls Resource Area Environmental Documentation**

During fiscal years 1995-2000, the Klamath Falls Resource Area completed 25 environmental assessments, 149 categorical exclusions, and 92 Plan conformance determinations. The environmental assessments vary in complexity, detail and length depending on the project involved.

In FY 2001, 23 categorical exclusions, 12 Plan Conformance and determinations of NEPA adequacy, and two environmental assessments were completed. The resource area continued work on the environmental impact statement for the Upper Klamath River ACEC and River Management Plan in FY 2001.

## **Protests and Appeals**

Only one protest has been received since the Klamath Falls Resource Area Management Plan Record of Decision was approved in 1995. This protest involved a proposed grazing use, and is still on hold, pending a final decision.

## **Plan Maintenance**

The Klamath Falls Resource Area Management Plan Record of Decision was approved in June of 1995. Since that time, the Klamath Falls Resource Area has implemented the plan across the entire spectrum of resources and land use allocations. As the plan is implemented it sometimes becomes necessary to make minor changes, refinements or clarifications of the plan. Potential minor changes, refinements or clarifications in the plan may take the form of maintenance actions.

Maintenance actions respond to minor data changes and incorporation of activity plans. This maintenance is limited to further refining or documenting a previously approved decision incorporated in the plan. Plan maintenance will not result in expansion of the scope of resource uses or restrictions or change the terms, conditions and decisions of the approved resource management plan. Maintenance actions are not considered a plan amendment and do not require the formal public involvement and interagency coordination process undertaken for plan amendments.

Important plan maintenance will be documented in the Klamath Falls Resource Area Planning Update and Annual Summary. Examples of possible plan maintenance issues that would involve clarification may include the level of accuracy of measurements needed to establish riparian reserve widths, measurement of coarse woody debris, etc. Much of this type of

clarification or refinement involves issues that have been examined by the Regional Ecosystem Office and contained in subsequent instruction memos from the BLM Oregon State Office. Depending on the issue, not all plan maintenance issues will necessarily be reviewed and coordinated with the Regional Ecosystem Office or Provincial Advisory Committee. Plan maintenance is described in the Klamath Falls Resource Area Management Plan Record of Decision.

### **Plan Maintenance for fiscal year 1995**

- REO memorandum dated 10/13/94: Memo reviewing BLM's interpretation of Coarse Woody Debris requirements.
- REO Memorandum dated 3/22/95: Memo reviewing BLM site potential tree height determination.
- REO Memorandum dated 4/7/95: Clarifies access for key watersheds, how to meet S&G for no net increases in roads where third parties have access rights.
- REO Memorandum dated 7/5/95: Interagency memo exempting certain silvicultural activities from LSR assessment requirements.
- BLM IM OR-95-123, dated 7/5/95: Memo clarifying when watershed analysis is and is not required for activities in Riparian Reserves.
- REO Memorandum dated 7/24/95: Memo changing status of dwarf mistletoe in Table C-3 of the ROD.
- REO Memorandum dated 8/31/95: Memo on LSR boundary adjustments.

### **Plan Maintenance for fiscal year 1996**

- REO Memorandum dated 12/15/95: Memo clarifying REO review of LSR assessments.
- Memo on protocols for Survey & Manage amphibians (BLM IB-OR-96-006, dated 3/19/96).
- REO Memorandum dated 4/26/96: Additional Guidance on LSR assessment reviews.
- REO Memorandum dated 6/11/96: Memo changing provisions regarding management of the lynx.
- Memo implementing Regional Ecosystem Office memo on management of lynx (BLM IM-OR-96-97, dated 6/28/96)
- Memo on plan maintenance (OR IB-OR-96-294, dated 7/5/96)
- REO Memorandum dated 7/9/96: Memo exempting certain commercial thinning projects in LSRs and MLSAs from REO review.
- Internal Memorandum No. OR-96-108 (dated July 26, 1996) instructed the Klamath Falls Resource Area to remove Buxbaumia piperi, a moss that was erroneously listed as a species considered at risk in the Northwest Forest plan. This removal was deemed necessary B. piperi is not considered to be rare, therefore the standards and guidelines from the Northwest Forest Plan were applied in error.
- Memo on dwarf mistletoe (BLM IB-OR-95-443, dated 8/15/96)
- REO Memorandum dated 9/6/96: Draft memo limiting surveys for certain arthropods to southern range.
- REO Memorandum dated 9/30/96: Memo amending commercial thinning exemption in LSRs.

### **Plan Maintenance for fiscal year 1997**

- BLM IM-OR-97-007, dated 11/1/96: Interagency Memo clarifying implementation of S&M component 2 species; contains definitions of S&G terms such as "ground disturbing" and "implemented".
- Memo directing changes in surveys for arthropods (BLM IB-OR-97-045, dated 11/8/96).
- Memo on implementing Coarse Woody Debris Standard & Guide (BLM IB-OR-96-064, dated 11/19/96).
- Memorandum dated November 8, 1996: Northwest Forest Plan Record of Decision (ROD). The sentence "Understory and forest gap herbivores" (page 61) was changed to be specific to the south range.



- Northwest Forest Plan, Adjustments in the Great Gray Owl (GGO) Survey Protocol. These adjustments were recommended by the Research and Monitoring Committee subsequent to findings and recommendations of a science panel. The six recommendations for the 1997 survey season were incorporated into the May 12, 1995 version of the protocol. In addition, habitat occupancy are to be located in habitat with the highest likelihood of supporting nesting Great Gray Owls. Methods, locations, and timing of habitat occupancy surveys are at the discretion of the resource area. Among the recommendations is one acknowledging that, using the onset of snowmelt to determine the start of the survey season, may not allow completion of all four visits prior to May 15. However, there should still be a good faith effort put forth to complete the four visits between March 15 and May 15, even if they go past the specified time period. A total of six visits is still required. In southwestern Oregon, some Great Gray Owls have been found below 3,000 feet elevation. Although not a requirement at this time, surveys below 3,000 feet (but otherwise according to protocol) will both assist in maintaining species viability and provide important data for evaluation of the GGO Record of Decision requirements. Field offices should assess which, if any, lower elevation locations would be priority areas to survey given the existing workload, staffing, and funding.
- In 1997, the Klamath Falls Resource Area developed some criteria to use to select the "16-25 large green trees per acre..." for retention in a harvest unit. As of 1997, the Klamath Falls Resource Area was still trying to determine which prescription/harvest unit this standard and guideline was intended for (Density Mgt, Regeneration Harvests, Commercial Thinnings, Patch Cut, etc.). (See 1999 Plan Maintenance for clarification).
- The 1997 APS stated: Klamath Falls Resource Area RMP, Timber Resources, Page 56, Unscheduled Harvests, 4<sup>th</sup> paragraph, "On the Westside, retain 16 to 25 large green trees per acre in harvest units". This plan maintenance clarifies that harvest units, prescription units, and treatment units are the same thing. For each prescription unit, stand exams will be conducted to determine existing stand structure. Unit reports will show, by species: basal area, crown closure, and the average number of trees per acre by diameter class. The number of snags and amount of coarse woody debris will also be determined. A prescription unit average of at least 16 green trees from the larger size classes present within the unit will be retained. Criteria for retention will be:
  - **Species:** Tree species naturally adapted to the site, especially those species presently under-represented (usually ponderosa pine, Douglas-fir, and sugar pine).
  - **Condition:** Vigorous trees and other trees in any condition having special habitat characteristics. This mix, will ideally supply overstory structure, as well as a variety of a snags and logs in a various decay classes over an extended time period.
  - **Size:** Trees from the larger size classes of a given unit. (The size and density of trees vary tremendously, however. The largest trees in some units do not exceed 14 inches DBH; others have many trees over 30 inches DBH).

## Plan Maintenance for fiscal year 1998

- Guidance on Implementation of the 15 percent retention Standard & Guideline: Joint BLM/Forest Service final guidance, which incorporated the federal executives' agreement, was issued on September 14, 1998, as BLM-Instruction Memorandum No. OR-98-100. The memorandum emphasizes terminology and intent related to the Standards and Guidelines, provides methods for completing the assessment for each fifth field watershed, dictates certain minimum documentation requirements, and established effective dates for implementation. This Instruction memorandum is adopted in its entirety as RMP clarification.
- Survey Protocols for Survey and Manage Species: Final protocols were issued during FY98 for Component 2 lichens, the fungus *Bridgeoporus nobillissimus*, terrestrial mollusks, and aquatic mollusks. These protocols are adopted in their entirety as RMP clarification.
  - Environmental Justice: Executive Order 12898 of February 11, 1994: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income



Populations directs all federal agencies to "...make achieving environmental justice part of its mission by identifying and addressing...disproportionately high and adverse human health or environmental effects of its programs, policies and activities."

New projects with possible effects on minority populations and/or low-income populations will incorporate an analysis of Environmental Justice impacts to ensure any disproportionately high and adverse human health or environmental effects are identified and reduced to acceptable levels, if possible.

Copies of the Executive Order, the accompanying Memorandum for the Heads of All Departments and Agencies, and Council on Environmental Quality Guidance on Environmental Justice issued February 1998 can be requested from the Klamath Falls BLM office.

### **Plan Maintenance for fiscal year 1999**

- An amendment to the RMP on Unintentional Encroachments and Survey Hiatuses was completed in FY 99. The plan amendment allowed a 1.62-acre tract of land to be moved from Land Tenure Zone 1 to Land Tenure Zone 3, which allows for sale. The amendment added the provision to the RMP Land Tenure Adjustment - Management Actions/Direction for All Land Use Allocations section:
- "Where survey hiatuses and unintentional encroachments on public lands are discovered in the future that meet disposal criteria, the lands may be automatically assigned to Zone 3 for disposal."
- Correction of numerous errors or updates to Appendix H - "Grazing Management and Rangeland Program Summary" of the KFRA ROD/RMP (pages H-1 through H-77).
  - Page H-5, Chase Mountain Allotment (0101); Page H-7, Edge Creek Allotment (0102) and Buck Mountain Allotment (0103); Page H-10, Dixie Allotment (0107); Page H-11, Dry Lake Allotment (0140); and H-13, Grubb Springs Allotment (0147). Under the "Constraints" sections, change "Weyerhaeuser Company" to "U.S. Timberlands, Inc.". This reflects the 1986 change in ownership for all of these private, intermingled lands.
  - Page H-26, JELD-WEN allotment (0824). Due to land exchanges, the "Public Acres" should be changed from 360 to 240. Also, the "Active Preference", "Total Preference", and "Total" under the "Grazing Administration Info (AUMs)" column should be changed from 36 to 24.
  - Page H-32, *Kethcham* allotment (0835). Name should be spelled **Ketcham**.
  - Page H-51, Campbell allotment (0878). "Suspended nonuse" should be 13 AUMs instead of 12; "Total Preference" should be 60 AUMs instead of 59.
  - Page H-56, Dry Prairie allotment (0885). "Exchange of Use" AUMs should be changed from 275 AUMs to the "30 AUMs permanent AUMs, although the total number is variably higher depending on private land leases in the Dry Prairie pasture".
  - "Corrections of errors or updates to Klamath Falls Resource Area RMP Appendix H, Grazing Management....."
  - Page H-56, Dry Prairie allotment (0885). Under "Grazing Administration Info. (AUMs)" the "Active Preference" should be changed from 608 to 642 AUMs, and the "Suspended Nonuse" should be changed from 392 to 358 AUMs. This change reflects the transfer of state lands to public ownership in 1988 that was not previously reflected on the grazing permits.
- Additional information to the Grazing Management section of the ROD/RMP dealing with the recently implemented Standards for Rangeland Health.
  - KFRA ROD/RMP, Page 62-63, "Grazing Management", "Management Actions/Direction", "General" section. The following should be added after the 5<sup>th</sup> paragraph (one on Standards and Guidelines): Recently (August 12, 1997), the "Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public lands Administered by the Bureau of Land Management in the States of Oregon and Washington" was implemented. This and related guidance requires that all grazing lands be assessed to see if the grazing use meets the 5 Standards for Rangeland Health. These standards address watershed function in uplands; watershed function in riparian



areas; ecological processes; water quality; and native, threatened and endangered, and locally important species. This guidance will be effected in accordance with the KFRA's "Plan for the Implementation of Standards and Guidelines" dated October 29, 1998 (available upon request).

- Additional support for the Appropriate Management Level (AML) of 30-50 head for the Pokegama Herd Management Area (HMA).
  - KFRA ROD/RMP, Page 64, "Wild Horse Management", "Management Actions/Directions" section. Additional support information should be added after the second paragraph as follows:
  - The Lakeview District Wild Horse Gather Environmental Assessment (OR-010-95-10) and the Topsy-Pokegama Landscape Analysis (July 1996) both affirmed that the wild horse herd should be kept within the 30-50 head AML as proposed in the ROD/RMP. This level is necessary to "...ensure a thriving natural ecological balance... and protect the range from deterioration associated with overpopulation" as stated in this plans objectives for Wild Horse Management and required by the Wild Free-Roaming Horse and Burro Act of 1971. 20 head were removed from the HMA in 1996 in order to get the herd number down within the AML.
- Klamath Falls Resource Management Plan, Appendix K, Water and Soils, Page K-8, Implementation Monitoring Question #12 is not stated correctly. Add the word "coordinated" before the word "watershed-based". Thus, the first part of the question should read: "What is the status of cooperation with other agencies in the development of coordinated watershed-based Research Management Plans and other cooperative agreements to meet Aquatic Conservation Strategy Objectives?"
- In the RMP dated June 1995, The section on energy and minerals refers to restrictions listed in appendix "G" located in volume II of the Final KFRA RMP & EIS. **This should refer to appendix "K" in Volume II.**
- Appendix "G", pages 12-13 in the Final KFRA RMP/ROD, dated September 1994, failed to give exact distant measurement for the buffers associated with the timing limitations for bald and golden eagles, osprey and sage grouse leks. **The sentence should read** " Surface occupancy and use is prohibited . . . , within 1/4 mile of known . . . sites.
- Appendix G, KFRA/ROD, pages 12 and 13 **Add:** Timing Limitation, Resource: Wildlife - Northern Spotted Owl, Stipulation: Surface occupancy and use is prohibited from March 1 to August 15, within 1/4 mile of known Northern Spotted Owl nest sites and nesting habitat.
- In same document and same appendix on page G-15, the controlled surface use for the Upper Klamath River - segment 2 should also state "**1/4**" mile.
- Change in specific provisions regarding management of the great gray owl. The NFP Record of Decision page C-21; Klamath Falls Resource Area RMP Record of Decision pages 39 & 40.

The NFP states the following with regard to management: "Specific mitigation measures for the great gray owl, within the range of the northern spotted owl, include the following: provide a no-harvest buffer of 300 feet around meadows and natural openings....."

For the Topsy/Pokegama Landscape Analysis Area, the Klamath Falls Resource Area wrote a Late Successional Reserve Assessment (LSRA) which addressed a variety of habitat manipulations for the long-term enhancement of great gray owl nesting habitat within the 300-foot buffers required around meadows and natural openings. These habitat manipulations were proposed in areas where the following conditions are present: 1) marginally suitable as great gray owl habitat, 2) at risk of decline to the point where suitable nesting habitat conditions are unattainable in the long-term, and 3) at risk due to poor forest health conditions including high fuel loads and/or overstocking.

As a result of discussions in 1999 between members of the Regional Ecosystem Office Team and the Klamath Falls Resource Area Staff, meadows and natural openings would be

buffered only in cases where it has been determined the area is “occupied” by great gray owls. Occupancy is defined in the May 12, 1995, great gray owl survey protocol. Forested areas adjacent to meadows and natural openings would receive 300-foot buffers within approximately two miles from activity centers of sites occupied by great gray owls.

A Memorandum from the Executive Director to the State Director dated August 4, 1999, served as documentation of the Regional Ecosystem Office’s (REO) review of the Late Successional Reserve Assessment and finding that the LSRA provides a sufficient framework and context for future management activities within the 300-foot meadow buffers in the Topsy/Pokegama Landscape Analysis Area.

- On pages 23, 33 & 56 of the KFRA RMP, for Westside Matrix lands, Management Actions / Directions states:

*“Retain 16 to 25 large green trees per acre where available.”*

To be consistent with the Medford RMP, Chapter 2-21, the KFRA will change the wording in the KFRA RMP to read:

*“Retain at least 16 to 25 large<sup>1</sup> green trees per acre in regeneration harvest units.”*

### **Rationale for change:**

The proposed change will help clarify when the KFRA must meet the 16-25 standard and guide (S&G). It was noted during the 3<sup>rd</sup> year evaluation that there was a difference in the wording and subsequent interpretation between the Medford District and the KFRA RMPs relating to this S&G. The Medford District applies this S&G to regeneration harvest units only. The word “regeneration” was left out of the KFRA RMP. Subsequently, KFRA personnel interpreted this S&G be applied to all types of harvest units including density management harvests. The KFRA has completed 4 density management harvests to date and post-treatment stand exam data indicates that over 200 trees per acre are being retained including the larger and more vigorous trees. BLM Managers feel that this S&G is not applicable nor was it intended for density management harvests and should only be applied to regeneration harvest units as defined in the Medford RMP. Presently, the KFRA has not implemented any regeneration harvests. The 16 to 25 tree S&G in regeneration harvest units should be sufficient to meet the intended objectives of structural retention for both a legacy component as well as serve as a shelterwood for the understory component. In addition, this change will align with how these stands were initially modeled.

- On pages 23, of the KFRA RMP, for Westside Matrix lands, Management Actions / Directions states:

*“When an area is regeneration harvested, limit patch size to 3 acres.”*

The above sentence erroneously includes the word “regeneration” where “density management” was intended. The KFRA will modify the patch cut size limit from 3 acres to 5 acres. The limit on patch cuts to 15% or less of the density management harvest area, which was intended, and was used in modeling, was not mentioned in the RMP. Therefore, the correct wording for this maintenance should be modified to read:

*“Patch cuts within a density management unit are limited to 5 acres in size and to no more than 15% of the density management treatment area.”*

### **Rationale for Change:**

A clarification is needed between patch cuts and regeneration harvests. Patch cuts are small openings in relatively large density management units. The primary objective of cutting small patches/openings is to regenerate under-represented species in the stand; normally pines and Douglas-fir. Due to past harvesting practices and fire suppression, the species composition of stands has trended from shade intolerant species (pines and Douglas-fir) towards stands dominated by tolerant species (white fir). On page E-10 (Appendix E) of the RMP, Table E-1 lists the “Desired Species Composition (by percent



conifer basal area)” for the South General Forest Management Area (SGFMA). The RMP states on page E-10 that the KFRA is to “Manage so that trees species over time trend toward ...” these composition levels. One of primary reasons for this objective is to improve the resiliency of the stands to natural disturbances (insects, disease, and fire). The small patch cuts are one of the prescriptions the KFRA is using to meet the species composition objective.

The amount of patch cuts that can be implemented in a density management unit is not changing. The limit, as modeled, has always been and will remain up to 15% of the unit. However, because the 15% limit has never been documented, it was necessary to add that statement as well. The size is increasing from 3 acres to 5 acres to insure that sufficient sunlight is reaching the younger seedlings and is not impacted by the shade from the patch cut edge. To date, approximately 72 acres (2.3%) of 3072 acres of density management treatments have received patch cuts.

- **Clarification of What a Regeneration Harvest is and The Constraints Involved When Implementing.**

A regeneration harvest is a silvicultural system discussed in a number of places in the RMP. The partial objective of regeneration harvests (See Glossary, page 6-14, Vol. 1 of the FEIS) is to open “a forest stand to the point where favored tree species will be reestablished.” There are two constraints to regeneration harvests. The first is mentioned in Appendix E, page E-10 of the RMP that states, “Regeneration harvests would not be programmed for stands under 120 years of age and generally would not be programmed for stands under 150 years of age within the next decade unless required by deteriorating stand condition, disease, or other factors that threaten the integrity of the stand.” The second constraint relates to the Plan Maintenance items mentioned above that states; retain at least 16 to 25 large green trees per acre in regeneration harvest units. The KFRA projected 131 acres of regeneration harvests on the Westside and 33 acres on the Eastside. To date, no regeneration harvests have been implemented due to placing priority on mortality salvage sales.

- **Clarification of Snag Classification**

During a timber sale review in KFRA in fiscal year 1999, the initial post-treatment stand exam data indicated that not enough Class 1 & 2 snags were retained. The stand exam data was surprising because many snags were intentionally marked for removal as required in the silvicultural prescription due to an already abundant down fuels load and snags at the time of marking. A review of the post-treatment stand exam data revealed that a snag was only classified as Class 1 or 2 if it had just died and/or still had red needles on it (1-2 years old). All other snags were classified as Class 3, 4, or 5. The KFRA determined that it needed a standardized format for classifying snags. The BLM Forest Survey Handbook, BLM Manual Supplement 5250-1, pages IV-10 to IV-12 was reviewed to determine if it was sufficient for classifying snags. The handbook provides both pictures and descriptions of the different snag categories. The KFRA concluded that the handbook would be sufficient for classifying snags for future monitoring purposes.

## **Plan Maintenance for fiscal year 2000**

- **Page I-7, KFRA RMP, Appendix I - Land Tenure,**

**Delete:** Remove the following lands from Land Tenure Zone 3 and place them into Land Tenure Zone 1.

T.36 S., R.15 E. W.M.; Sec. 28 (all); Sec. 32 (all).

**Rational for Change:** The presence of the endangered species, cinder pit, and wetlands associated with Campbell Reservoir on the public lands preclude the BLM from making the finding that the resource values on the federal land are less than the resource values of the private land.

- Page #\_C-44, Last Paragraph, Line # 2 (Also found on other pages) of **Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning documents Within the Range of the Northern Spotted Owl Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl.**

**“Provide for retention of old-growth fragments in watersheds where little remains.”**

“Landscape areas where little late-successional forest persists should be managed to retain late-successional patches. This standard will be applied to fifth field watersheds (20-200 square miles) in which federal forest lands are currently comprised of 15 percent or less late-successional forest.”

- Pages 51-52, **KFRA RMP**, Off-Highway Vehicles

**Add:**

- To allow off-highway vehicles to use BLM/Klamath Falls Resource Area roads when weather conditions are such that damage to roads will not occur, or to use roads that will not impact threatened, endangered, or sensitive plant, animal, or fish species.
- To prevent off-highway vehicles from using BLM/Klamath Falls Resource Area roads by extending the seasonal closure when weather conditions are such that damage to roads will occur, or to prevent use of roads that will impact threatened, endangered or sensitive plant, animal, or fish species.

Before either scenario is implemented, the proposal must be reviewed by the Klamath Falls Resource Area Interdisciplinary Team (ID Team). The ID Team will make a recommendation to the Klamath Falls Field Manager to open the road or to extend the closure. The Field Manager will consider the ID Team’s recommendation and make a decision on that recommendation.

A decision to extend the closure must be accompanied by publishing a Notice of Emergency Closure in the Federal Register according to the regulations found at 43 CFR 8364.1.

**Rational for Change:** The Plan Maintenance provides a mechanism to close a road prior to November 1<sup>st</sup> or to extend the closure past April 15<sup>th</sup>, if conditions warrant it. The same mechanism would be used to delay closing a road past the November 1<sup>st</sup> date or to open a road prior to April 15, if conditions warrant it.

## **Plan Maintenance for fiscal year 2001**

### **2001 Amendment to the Northwest Forest Plan**

The Survey and Manage mitigation in the Northwest Forest Plan was amended in January 2001 through the signing of the Record of Decision (ROD) for the “Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines.” The intent of the amendment was to incorporate up-to-date science into management of Survey and Manage species and to utilize the agencies’ limited resources more efficiently. The ROD provides approximately the same level of protection intended in the Northwest Forest Plan but eliminates inconsistent and redundant direction and establishes a process for adding or removing species when new information becomes available.



The ROD reduced the number of species requiring the Survey and Manage mitigation, dropping 72 species in all or part of their range. The remaining species were then placed into six different management categories, based on their relative rarity, whether surveys can be easily conducted, and whether there is uncertainty as to their need to be included in this mitigation. The following table shows a break down of the placement of these 346 species, and a brief description of management actions required for each.

The ROD identifies species management direction for each of the above categories. Uncommon species categories C and D require the management of “high priority” sites only, while category F requires no known site management. The new Standards and Guidelines also establish an in-depth process for reviewing and evaluating the placement of species into the different management categories. This process allows for adding, removing, or moving species around into various categories, based on the new information acquired through our surveys.

Approval of the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines* amended the Standards and Guidelines contained in the Northwest Forest Plan Record of Decision related to Survey and Manage, Protection Buffers, Protect Sites from Grazing, Manage Recreation Areas to Minimize Disturbance to Species, and Provide Additional Protection for Caves, Mines, and Abandoned Wooden Bridges and Building That are Used as Roost Sites for Bats. These standards and guidelines were removed and replaced by the contents of the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines*.

Plan Maintenance actions to delete all references to Management Action/Direction for Survey and Manage and Protection Buffer species in the Klamath Resource Area Resource Management Plan and Appendices and adopt the Standards and Guidelines contained in the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures* are required in response to the Record of Decision.

Copies of the ROD and Final SEIS may be obtained by writing the Regional Ecosystem Office at PO Box 3623, Portland, Oregon 97208, or they can be accessed at <http://www.or.blm.gov/nwfpnepa>.

**Table 39. Redefined Survey and Manage Categories Based on Species Characteristics**

Relative Rarity	Pre-Disturbance Surveys Practical	Pre-Disturbance Surveys Not Practical	Status Undetermined Pre-disturbance Surveys Not Practical
<b>Rare</b>	Category A - 57 species • Manage All Known Sites • Pre-Disturbance Surveys • Strategic Surveys	Category B - 222 species • Manage All Known Sites • N/A • Strategic Surveys	Category E - 22 species • Manage All Known Sites • N/A • Strategic Surveys
<b>Uncommon</b>	Category C - 10 species • Manage High-Priority Sites • Pre-Disturbance Surveys • Strategic Surveys	Category D - 14 species <sup>1</sup> • Manage High-Priority Sites • N/A • Strategic Surveys	Category F - 21 species • N/A • N/A • Strategic Surveys

<sup>1</sup> Includes three species for which pre-disturbance surveys are not necessary

## **Plan Maintenance for fiscal year 2002**

### **Change of RMP Evaluation Interval**

The RMP, in the Use of the Completed Plan section, established a three year interval for conducting plan evaluations. The purpose of a plan evaluation is to determine if there is significant new information and or changed circumstance to warrant amendment or revision of the plan. The ecosystem approach of the RMP is based on long term management actions to achieve multiple resource objectives including; habitat development, species protection, and commodity outputs. The relatively short three year cycle has been found to be inappropriate for determining if long term goals and objectives will be met. A five year interval is more appropriate given the resource management actions and decisions identified in the RMP. The Annual Program Summaries and Monitoring Reports continue to provide the cumulative RMP accomplishments. Changes to the RMP continue through appropriate amendments and plan maintenance actions. A five year interval for conducting evaluations is consistent with the BLM planning regulations as revised in November 2000.

The State Director decision to change the evaluation interval from three years to five years was made on March 8, 2002. The next evaluation of the Klamath Falls Resource Area RMP will address implementation through September 2003.



# **KLAMATH FALLS RESOURCE AREA**

## **RESOURCE MANAGEMENT PLAN**

### **MONITORING REPORT**

**Fiscal Year 2001**

1. 10/1/1988 11/11/1988 1.0

2. 10/1/1988 11/11/1988 1.0

10/1/1988 11/11/1988

10/1/1988



# **KLAMATH FALLS RESOURCE AREA RESOURCE MANAGEMENT PLAN MONITORING REPORT**

## **Fiscal Year 1996-2000 Monitoring Summary**

This document represents the fifth monitoring report of the Klamath Falls Resource Area Resource Management Plan for which the Record of Decision was signed in June 1995. This monitoring report compiles the results and findings of implementation monitoring of the five full fiscal years of implementation of the RMP, fiscal years 1996-2000. This report does not include the monitoring conducted by the Klamath Falls Resource Area that is identified in activity or project plans. Monitoring at multiple levels and scales, along with coordination with other BLM and Forest Service units, has been initiated through the Regional Interagency Executive Committee (RIEC).

The Resource Management Plan monitoring effort for Fiscal Years 1996-2000 addressed the 88 implementation questions relating to the 21 land use allocations and resource programs contained in the Monitoring Plan. There are 54 effectiveness and validation questions included in the Monitoring Plan. The effectiveness and validation questions were not addressed because some time is required to elapse after management actions are implemented in order to evaluate results that would provide answers.

### **Findings**

Monitoring results found full compliance with management action/direction in 21 of the 21 land use allocations and resource programs identified for monitoring in the plan. Monitoring results found full compliance in 87 of the 88 implementation monitoring questions contained in the plan.

The issue of soil health on the resource area is being investigated by quantifying disturbance levels. Concerns have been raised on the resource area about excessive soil compaction possibly occurring with repeated use of a mechanical harvester, mechanical slashbuster, or combination of both in a forest stand or juniper woodland over time. Use of a mechanical harvester/slashbuster results in greater areal ground disturbance since it is not confined to skid roads, although in theory a mechanical harvester reportedly causes less soil compaction since it exerts less pounds per square inch of force/pressure than other ground-based harvesting machinery. Since use of a mechanical harvester/slashbuster is becoming more and more common and is the most economical choice for density-management treatment of forest stands and juniper woodlands, the resource area is measuring the areal extent of soil disturbance and changes in soil bulk density in representative ground disturbing projects to evaluate soil health.

Findings from monitoring done in 1998 in one timber sale area suggest that detrimental soil compaction, as defined by both regional and resource management plan standards and guidelines, may have occurred. Findings from monitoring done in a different timber sale area in 1998, 1999 and completed in 2000 suggest that the threshold for detrimental compaction (15 percent increase in bulk density) was approached but not exceeded. However, multiple years of monitoring mechanical harvester/slashbuster use are needed before drawing any conclusions about soil compaction. Consequently, the resource area will continue monitoring representative projects using quantitative methods in order to accumulate more data from which conclusions about the areal extent and degree of soil compaction resulting from the use of a mechanical harvester can be made. Copies of the soil monitoring reports, detailing methods and results, can be obtained at the resource area office.

Recommendations

No implementation or management adjustments are recommended, as Fiscal Year 1996-2000 monitoring results indicate very high compliance with management action/direction.

Conclusions

Analysis of the Fiscal Years 1996-2000 monitoring results concludes that the Klamath Falls Resource Area has almost 100% compliance with management action/direction, and therefore no major changes in management direction or resource Management Plan implementation is warranted at this time. The results indicate a continuing conscientious implementation of the plan by informed and knowledgeable staff and managers.

Fiscal Year 2001 Monitoring Report

Introduction

The information following represents the sixth monitoring report of the Klamath Falls Resource Area Resource Management Plan for which the Record of Decision was signed in June 1995. This monitoring report compiles the results and findings of implementation monitoring of the sixth full fiscal year of implementation of the RMP, fiscal year 2001. Tables 40 and 41 provide a summary of the projects monitored and the selection categories respectively.

Table 40. Type and Number of Projects Monitored - FT 2001

Project Type	Number & Name of Projects Monitored
Timber Sales	4 – Grenada East Timber Sale, Muddy Tom Timber Sale, Stukel Mtn. Timber Sale Riparian Reserve, Bull Springs Salvage.
Silviculture Projects	9 - Bear Valley Wildlife Refuge: Using silvicultural techniques to improve nesting and roosting habitat for bald eagles; Forest Development Projects: restoration thinning, precommercial thinning, Oak woodland thinning, pruning, site preparation, tree planting, reforestation surveys, maintenance/protection of stands. Hamaker Slashbuster.
Fish Habitat Projects	6 - Wood River Wetland Suckers and Redband Trout, Gerber Reservoir Suckers, Dry Prairie, Horsefly, and Pitchlog Grazing Allotments for suckers.
Riparian Habitat Projects	3 - Spencer Riparian Thin, Harpold Riparian juniper treatment,
Wetland Restoration Project	1 - Wood River Wetland.
Wildlife Habitat Projects	20 - Wood River Wetland: Yellow rails, spotted frogs, sandhill cranes, bald eagles, and neotropical birds; Muddy Tom Timber Sale: Great gray owl meadow buffers and spotted owls; Hayden Creek: Spotted owl territory; Gerber Reservoir: Bald eagle; Northern spotted owl historic nesting sites; bald eagle aerial and ground surveys and mid-winter counts; Canada Lynx and Forest carnivore monitoring; Great gray owl monitoring prior to ground-disturbing activities; Muddy Tom and Clover Hook-up: Survey and Manage terrestrial mollusk surveys; known Northern Goshawk site monitoring; Survey and Manage species (lichen, fungi, bryophytes, and vascular plants) are being surveyed until final SEIS is completed; Bear Valley Wildlife Refuge: BLM & USFWS cooperating to improve bald eagle roosting and nesting habitat; Peregrine falcon habitat monitoring for the Lakeview District; Fourteen bald eagle nest territories and three roost areas monitored in cooperation with Oregon State University, Oregon Eagle Foundation, U.S. Timberlands, and Weyerhaeuser Corp.; Townsend's Big-eared bat monitoring on the Klamath River.
Prescribed Burns	2 – South Bly, Klamath Falls Forest Estates
Construction Projects	2 - Topsy Campground Paving, Gerber Reservoir Recreation Site
Grazing Projects	20 - existing improvements (fences, spring improvements) 53 - grazing allotments (studies and use supervision)
Water & Soil Projects	2 - Clover Creek Restoration, Barnes Valley Low Water Crossing, Monitoring
Juniper Projects	10 - Lorella, Lower Swan, Bumpheads, Kilgore, Schnipps, Caseview, Short Lake Mountain, Midway, Norcross, and Hamaker Mechanical Slashbuster Fuel Reduction.



**Table 41. FY 2001 Implementation Monitoring Selection Categories**

Selection Categories	FY 2001 Projects	FY 2001 Projects Monitored	Percent Monitored
Ground-Disturbing Activities (other than timber sales)	18	16	89%
Grazing Allotments	95*	53**	55%***
Projects in Riparian Reserves	9	3	33%
Removing Structures within Riparian Reserves	0	0	0
Projects in Late Successional Reserves	0	0	0
Timber Sales in Watersheds With Less Than 15% Late Successional Forest	0	0	0
Timber Sales (Harvesting completed)	1	1	100%
Juniper Projects	9	9	100%
Projects Within or Adjacent to Special Areas	2	2	100%
Projects That Include or are Adjacent to Special Habitats	1	1	100%
Projects in VRM II or III Areas	7	7	100%
Projects Within or Adjacent to Wild & Scenic River Corridors	1	1	100%
Projects in Rural Interface (prescribed fire)	2	2	100%
Noxious Weed Project (sites)	220	123	56%
Prescribed Burn Projects	8	2	25%
Projects That Required Dust Abatement	0	0	0

Note: Minimum monitoring requirement in each listed category is 20%. The district exceeded the minimums in numerous categories, primarily due to overlapping applicability (many projects meet several criteria in above table).

\*The KFRA has 95 allotments with grazing currently authorized under the RMP. Of these, 16 were in non-use in FY 2001.

\*\* Includes one or more of the following monitoring studies or activities: utilization, use supervision, condition, trend, actual use, photo points, range/riparian studies.

\*\*\*The 25 allotments are only 56% of the KFRA's total allotments, however, they comprise approximately 83% of the KFRA grazing land base.

This report does not include the monitoring conducted by the Klamath Falls Resource Area that is identified in activity or project plans. Monitoring at multiple levels and scales along with coordination with other BLM and Forest Service units has been initiated through the Regional Interagency Executive Committee (RIEC).

## Discussion of Discrepancies

### Timber Harvest Acres - Discrepancies from the RMP:

Table 42, below, compares projected volume and acres to actual volume and acres harvested to date. On the Westside, approximately 36.3 MMBF (61 percent of the decadal projection) has been harvested on approximately 12,950 acres. On the Eastside, approximately 3.3 MMBF (83% of the decadal projection) has been harvested on approximately 2,357 acres. There is a discrepancy between projected versus actual acres treated. A combination of factors has contributed to this discrepancy. Only one regeneration harvest (totaling 39 acres) has been implemented in the first seven years on either the Westside and none on the Eastside. Under the RMP, approximately 131 acres were planned per year (917 acres in seven years) on the Westside and 33 acres on the Eastside. Table 42 displays how discrepancies were determined by comparing projected vs. actual treatments.

In FY2001, 3.0 million board feet (MMBF) was sold. This represents 50% of the 6 MMBF allowable sale quantity. Cumulative information on timber harvest acres, volumes, and harvest types since the beginning of the RMP are provided in Table 23, and above in Table 42.

Except for the District declared Allowable Sale Quantity, projections made in the RMP are not intended as management action/direction, but rather are underlying RMP assumptions. Projected levels of activities are the approximate level expected to support the Allowable Sale Quantity.

Unresolved litigation, and uncompleted strategic surveys under Survey and Manage have limited the ability to offer timber sales at the levels anticipated by the RMPs during Fiscal Year 2001 and prior years. It is not possible at this time to accurately predict the duration or effect of these short term uncertainties on the long term ability to implement the underlying assumptions that form the basis of the Allowable Sale Quantity. Therefore, changes to the

**Table 42. Comparison of Harvest Volumes and Acres (Projected vs. Actual)**

Harvest Method	Projected Vol. MMBF	Actual Vol. MMBF	Projected Acres	Actual Acres
<b>Westside</b>				
Density Management	41.37	23.74	5,796	6,821
Regeneration Harvests			917	39
Mortality Salvage	0	12.52	0	6,090
<b>Totals</b>	<b>41.4</b>	<b>36.3</b>	<b>6,713</b>	<b>12,950</b>
<b>Eastside</b>				
Density Management	2.8	2.2	1,883	1,337
Regeneration Harvests			231	0
Mortality Salvage	0	1.1	0	1,020
<b>Totals</b>	<b>2.8</b>	<b>3.3</b>	<b>2,114</b>	<b>2,357</b>

MMBF = Million Board feet



RMP based on the inability to implement timber resources decisions and assumptions in fiscal year 2001 would be premature at this time. These circumstances will be more closely examined during the next RMP evaluation.

### **Wildlife Discrepancies:**

As part of the RMP, it was planned to treat 1/4 of the brushfields in each allotment during a decade. Treatment, in this case, meant returning the brushfield to an early seral state or rejuvenating it through extensive use of mechanical, manual or fire treatments. The acre figures noted in the Grazing EIS were based on 1/4 of the acres of identified mature brushfield in each allotment. Since the RMP was approved, the range inventories have shown the need for more treatment acres to simply maintain existing sagebrush stands in optimum condition. The treatments are not as extensive as far as ground disturbance as originally proposed but may cover more acres per allotment.

The prescribed fire EA (Environmental Assessment OR-014 94-09) was incorporated into the RMP and proposed treating up to 10,000 acres. Currently, the projects proposed to treat excess fuels under the Fire EA, treat some of the same allotments where brushfields are scheduled to be managed. Fuels management treatments were also analyzed in the RMP.

Therefore, there may be more acres treated in each allotment than is covered in Appendix Hof the RMP. However since the types of treatments have been analyzed in the RMP and the disturbance per acre is less than previously predicted, the impacts are well within those analyzed in the RMP.

The number of acres treated in large blocks for density management purposes may have a negative effect upon deer and elk and other species dependent upon the understory components of a stand for cover. In order to provide some variation in the stand density across the landscape, small clumps of trees were retained within the sale areas. The number and acreage of clumps retained was dependent upon the importance of an area to deer and elk and upon the original characteristics of the stand. The combination of these clumps and reserve areas such as Riparian Reserves comprise up to 20 percent of the harvested acres for a given entry. Some of these "wildlife clumps" are comprised primarily of white fir and are overstocked. These "wildlife" clumps may be treated during subsequent harvest entries and are not considered to be permanent reserves. For the sales within the third year evaluation time frame, all wildlife clumps were less than an acre. For the period beyond this evaluation period, larger clumps of up to 15 acres may be retained. The decision not to thin these areas may result in an increase in the number of snags and thus result in a potential benefit to woodpeckers and secondary cavity nesters. No evaluation of the use of these wildlife clumps by wildlife has been made to date.

## **All Land Use Allocations (RMP/ROD, Appendix K, page K-1)**

### **Expected Future Conditions and Outputs**

- Protection of SEIS special attention species so as not to elevate their status to any higher level of concern.

### **Implementation Monitoring**

**Monitoring Question 1:** Are surveys for the species listed in Appendix E (RMP/EIS) and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) conducted before ground-disturbing activities occur?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and re-examined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** Slim Chicken timber sale, Saddled Again timber sale, and Surveyor Mountain (Unit 36-2) timber sale.

**Findings (for Slim Chicken timber sale):**

**Animals**

*Great Gray Owl*

Surveys in 1998 and 1999 determined that there was no suitable habitat for Great Gray Owls in the area of this timber sale.

*Mollusks*

**Terrestrial**

Under the existing standards and guides during fall 2000, four Survey and Manage (S&M) terrestrial mollusk species *Prophysaon dubium* (tail dropper), *Prophysaon coeruleum* (blue-gray tail dropper), *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband) had potential to occur within the resource area. Pre-disturbance surveys for terrestrial mollusks were conducted in the fall of 2000. Only two species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband), which potentially occur in the resource area require pre-disturbance surveys under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2001, surveys according to protocols of potential habitat were conducted on the Slim Chicken Timber Sale Area.

The majority of Survey and Manage mollusk site locations were captured with a Global Positioning System (GPS), and entered into the regional corporate database for S&M, referred to as ISMS (Interagency Species Management System).

**Aquatic**

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. There is no potential habitat within the Slim Chicken timber sale for aquatic mollusks.

**Plants**

*Fungi*

Fall 2000 Survey and Manage (S&M) fungi surveys were conducted to the then existing protocols ("Survey Protocols for Seven Protection Buffer Fungi Version 1.3") in the Slim Chicken timber sale area. Under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001), pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species.

The majority of Survey and Manage site locations were flagged and captured with GPS and entered into ISMS. However, some locations could not be referenced using GPS because of technical difficulties capturing satellite signals in the field.

*Bryophytes*

Klamath Falls Resource Area has no potential habitat for any S&M bryophyte species, which require pre-disturbance surveys, therefore no bryophyte surveys were conducted.

*Lichens*

Klamath Falls Resource Area has no potential habitat for any S&M lichen species, which require pre-disturbance surveys, therefore no lichen surveys were conducted.



**Conclusions (for Slim Chicken timber sale):** Required surveys for the species listed in Appendix E (RMP/EIS) and/or Table 1-1 of the Standard and Guidelines (S&M SEIS) are being implemented.

**Findings (for Saddled Again timber sale):**

**Animals**

*Great Gray Owl*

Surveys were conducted according to protocols for this species in this area during FY 2001.

*Mollusks*

**Terrestrial**

Under the existing standards and guides during fall 2000, four Survey and Manage (S&M) terrestrial mollusk species *Prophysaon dubium* (tail dropper), *Prophysaon coeruleum* (blue-gray tail dropper), *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband) had potential to occur within the resource area. Pre-disturbance surveys for terrestrial mollusks were conducted in the fall of 2000. Only two species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband), which potentially occur in the resource area require pre-disturbance surveys under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2001, surveys according to protocols of potential habitat were conducted on the Saddled Again timber sale area.

**Aquatic**

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. There is no potential habitat within the Saddled Again timber sale for aquatic mollusks.

**Plants**

*Fungi*

Fall 2000 Survey and Manage (S&M) fungi surveys were conducted to the then existing protocols ("Survey Protocols for Seven Protection Buffer Fungi Version 1.3") in the Slim Chicken timber sale area. Under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001), pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species.

The majority of Survey and Manage site locations were flagged and captured with GPS, and entered into ISMS. However, some locations could not be referenced using GPS because of technical difficulties capturing satellite signals in the field.

*Bryophytes*

Klamath Falls Resource Area has no potential habitat for any S&M bryophyte species, which require pre-disturbance surveys, therefore no bryophyte surveys were conducted.

*Lichens*

Klamath Falls Resource Area has no potential habitat for any S&M lichen species, which require pre-disturbance surveys, therefore no lichen surveys were conducted.

**Conclusions (for Slim Chicken timber sale):** Required surveys for the species listed in Appendix E (RMP/EIS) and/or Table 1-1 of the Standard and Guidelines (S&M SEIS) are being implemented.

**Findings (for Saddled Again timber sale):**

**Animals**

*Great Gray Owl*

Surveys were conducted according to protocols for this species in this area during FY 2001.

*Mollusks*

Terrestrial

Under the existing standards and guides during fall 2000, four Survey and Manage (S&M) terrestrial mollusk species *Prophysaon dubium* (tail dropper), *Prophysaon coeruleum* (blue-gray tail dropper), *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband) had potential to occur within the resource area. Pre-disturbance surveys for terrestrial mollusks were conducted in the fall of 2000. Only two species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband), which potentially occur in the resource area require pre-disturbance surveys under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2001, surveys according to protocols of potential habitat were conducted on the Saddled Again timber sale area.

Aquatic

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. There is no potential habitat within the Saddled Again timber sale for aquatic mollusks.

**Plants**

*Fungi*

Fall 2000 Survey and Manage (S&M) fungi surveys were conducted to the then existing protocols ("Survey Protocols for Seven Protection Buffer Fungi Version 1.3") in the Slim Chicken timber sale area. Under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001), pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species.

The majority of Survey and Manage site locations were flagged and captured with GPS, and entered into ISMS. However, some locations could not be referenced using GPS because of technical difficulties capturing satellite signals in the field.

*Bryophytes*

Klamath Falls Resource Area has no potential habitat for any S&M bryophyte species, which require pre-disturbance surveys, therefore no bryophyte surveys were conducted.

*Lichens*

Klamath Falls Resource Area has no potential habitat for any S&M lichen species, which require pre-disturbance surveys, therefore no lichen surveys were conducted.



**Conclusions (for Saddled Again timber sale):** Required surveys for the species listed in Appendix E and/or Table 1-1 of the Standard and Guidelines (S&M SEIS) are being implemented.

**Findings (for Surveyor Mountain (Unit 36-2) timber sale):**

**Animals**

*Great Gray Owl*

Surveys were conducted according to protocols for this species for the timber sale unit in Section 36 of the Surveyor Mountain timber sale.

*Mollusks*

Terrestrial

Under the existing standards and guides during fall 2000, four Survey and Manage (S&M) terrestrial mollusk species

*Prophysaon dubium* (tail dropper), *Prophysaon coeruleum* (blue-gray tail dropper), *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband) had potential to occur within the resource area. Pre-disturbance surveys for terrestrial mollusks were conducted in the fall of 2000. Only two species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband), which potentially occur in the resource area require pre-disturbance surveys under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2001, surveys according to protocols of potential habitat were conducted in Section 36 of the Surveyor Mountain timber sale area.

Aquatic

Three undescribed S&M aquatic mollusk species in the genus

*Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. There is no potential habitat within the Surveyor Mountain timber sale for aquatic mollusks.

**Plants**

*Fungi*

Fall 2000 Survey and Manage (S&M) fungi surveys were conducted to the then existing protocols ("Survey Protocols for Seven Protection Buffer Fungi Version 1.3") in Section 36 of the Surveyor Mountain timber sale area. Under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001), pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species.

The majority of Survey and Manage site locations were flagged and captured with GPS, and entered into ISMS. Some locations could not be referenced using GPS because of technical difficulties capturing satellite signals in the field.

*Bryophytes*

Klamath Falls Resource Area has no potential habitat for any S&M bryophyte species, which require pre-disturbance surveys, therefore no bryophyte surveys were conducted.

*Lichens*

Klamath Falls Resource Area has no potential habitat for any S&M lichen species, which require pre-disturbance surveys, therefore no lichen surveys were conducted.

**Conclusions (for Surveyor Mountain (Section 36) timber sale):** Required surveys for the species listed in Appendix E and/or Table 1-1 of the Standard and Guidelines (S&M SEIS) are being implemented.

**Monitoring Question 2:** Are protection buffers being provided for specific rare and locally endemic species and other species in the upland forest matrix?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and re-examined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:**

Slim Chicken timber sale, Saddled Again timber sale, and Surveyor Mountain timber sale.

**Findings (for Slim Chicken timber sale):**

**Animals**

*Great Gray Owl*

Surveys in 1998 and 1999 determined that there was no suitable habitat for Great Gray Owls in the area of this timber sale.

*Mollusks*

Although blue-gray tail dropper (*Prophysaon coeruleum*) sites were located during the fall of 2000, this species was removed from the Survey and Manage list in Oregon by the January 2001 S&M SEIS. Therefore management of these sites is not required. Several specimens of mollusks thought to be in the genera *Pristoloma* and *Vespericola* were collected and sent to regional taxa experts for verification. If these specimens are determined to be the S&M species in these genera (*Pristiloma arcticum crateris*, *Vespericola pressleyi* or *V. shasta*), then the sites for these species will receive the appropriate buffers.

**Plants**

*Fungi*

Fungi surveys found seven species with a total of 52 sites of Category B fungi species which require management of all known sites. Based on professional judgement, Appendix J2 in the Northwest Forest Plan Final SEIS, and appropriate literature, buffer for each of these species were determined. The sites for three species received 60 foot radius no enter buffers, the sites for three other species received 60 foot radius no enter/no cut buffers, and the sites for one species received 25 foot no enter/no cut buffers.

**Conclusions (for Slim Chicken timber sale):** The required management actions for specific rare, and locally endemic, species, and other species in the upland forest matrix, are being implemented.

**Findings (for Saddled Again timber sale):**

**Animals**

*Great Gray Owl*

Surveys detected potential Great Gray Owl meadow habitat within this timber sale area. These meadows received the appropriated buffers.



*Mollusks*

Although blue-gray tail dropper (*Prophyaon coeruleum*) sites were located during the fall of 2000, this species was removed from the Survey and Manage list in Oregon by the January 2001 S&M SEIS. Therefore management of these sites is not required. Several specimens of mollusks thought to be in the genera *Pristoloma*, *Vespericola*, and *Monadenia* were collected and sent to regional taxa experts for verification. If these specimens are determined to be the S&M species in these genera, then the sites for these species will receive the appropriate buffers.

**Plants**

*Fungi*

Fungi surveys found three species with a total of 5 sites of Category B fungi species, which, require management of all known sites. Sites for one species received a 60 foot radius no enter buffer, sites for one species received a 60 foot no enter/no cut buffer, and sites for one species received a 25 foot no enter/no cut buffer.

**Conclusions (for Saddled Again timber sale):** The required management actions for specific rare and locally endemic species, and other species in the upland forest matrix, are being implemented.

**Findings (for Surveyor Mountain (Unit 36-2) timber sale):**

**Animals**

*Great Gray Owl*

Surveys were conducted throughout the Surveyor Mountain Area. No nest sites or owls have been located therefore no buffers were needed.

*Mollusks*

Specimens of mollusks thought to be in the genus *Vespericola* were collected and sent to regional taxa experts for verification. If these specimens are determined to be one of the S&M species in this genus (*Vespericola pressleyi* or *V. shasta*), then the sites for these species will receive the appropriate buffers.

**Plants**

*Fungi*

Fungi surveys found two species with a total of two sites of Survey and Manage fungi species. One species is a Category B species, which requires management of all known sites. This species received a 60 foot radius no enter buffer. The other species was a Category D species, which requires management of high-priority sites. This species is rare on the resource area and received a 60 foot no enter buffer.

**Conclusions (for Surveyor Mountain (Unit 36-2) timber sale):** The required management actions for specific rare and locally endemic species, and other species in the upland forest matrix are being implemented.

**Monitoring Question 3:** Are the known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) being protected?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and re-examined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** Slim Chicken timber sale, Saddled Again timber sale, and Surveyor Mountain (Unit 36-2) timber sale.

**Findings (for Slim Chicken timber sale, Saddled Again timber sale, and Surveyor Mountain (Unit 36-2) timber sale.):** Refer also to Questions 1 and 2 above.

**Animals**

*Mollusks*

There were no known terrestrial mollusk sites prior to on the ground surveys. See answers to questions 1 and 2. There are three known sites for aquatic mollusks on the resource area, but they are not located within any project area.

*Mammals*

There are no known sites of the red tree vole.

**Plants**

No known sites of S&M plant species were listed in the known site database for the Klamath Falls Resource Area previous to on-the-ground surveys. See answers to questions 1 and 2 for sites detected and protected as a result of pre-disturbance surveys.

**Conclusions:** There were no known sites of terrestrial mollusks, bryophytes, vascular plants, fungi, and lichen species listed in Appendix E and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) previous to on-the-ground surveys in the resource area. Known sites of aquatic mollusks are not within any project area. Populations found during surveys become known sites when they are detected. The required management actions for these species are being implemented.

**Monitoring Question 4:** Are the known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E of the RMP being surveyed?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and re-examined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** Slim Chicken timber sale, Saddled Again timber sale, and Surveyor Mountain (Unit 36-2) timber sale.

**Findings (for Slim Chicken timber sale, Saddled Again timber sale, and Surveyor Mountain (Unit 36-2) timber sale.)** See also answers to questions 1 and 2.

**Animals**

*Mollusks*

There were no known terrestrial mollusk sites prior to on the ground surveys. There are three known sites for aquatic mollusks on the resource area, but they are not located within any project area.

*Mammals*

There are no known sites of the red tree vole.

**Plants**

No known sites of S&M plant species were listed in the known site database for the Klamath Falls Resource Area previous to on-the-ground surveys. See answers to questions 1 and 2 for sites detected and protected as a result of pre-disturbance surveys.



**Conclusions:** Known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E of the RMP are being surveyed and protected.

**Monitoring Question 5:** Are high priority sites for species management being identified?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and re-examined following project completion, to determine if surveys are conducted for species listed in Appendix E, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix E are protected.

**Monitoring Performed:** Slim Chicken timber sale, Saddled Again timber sale, and Surveyor Mountain (Unit 36-2) timber sale.

**Findings (for Slim Chicken timber sale):**

**Animals**

*Great Gray Owl*

Surveys in 1998 and 1999 determined that there was no suitable habitat for Great Gray Owls in the area of this timber sale.

*Mollusks*

Although blue-gray tail dropper (*Prophysaon coeruleum*) sites were located during the fall of 2000, this species was removed from the Survey and Manage list in Oregon by the January 2001 S&M SEIS. Therefore management of these sites is not required. Several specimens of mollusks thought to be in the genera *Pristoloma* and *Vespericola* were collected and sent to regional taxa experts for verification. If these specimens are determined to be the S&M species in these genera (*Pristiloma arcticum crateris*, *Vespericola pressleyi* or *V. shasta*), then all the sites for these species will receive the appropriate buffers since they are Category A and B species.

**Plants**

*Fungi*

Fungi surveys found seven species with a total of 52 sites of Category B fungi species. Category B species require management of all known sites.

**Conclusions (for Slim Chicken timber sale):** Identification of high priority sites for species management has not been necessary.

**Findings (for Saddled Again timber sale):**

**Animals**

*Great Gray Owl*

Surveys detected potential Great Gray Owl meadow habitat within this timber sale area. These meadows received the appropriated buffers.

*Mollusks*

Although blue-gray tail dropper (*Prophysaon coeruleum*) sites were located during the fall of 2000, this species was removed from the Survey and Manage list in Oregon by the January 2001 S&M SEIS. Therefore management of these sites is not required. Several specimens of mollusks thought to be in the genera *Pristoloma*, *Vespericola*, and *Monadenia* were collected and sent to regional taxa experts for verification. If these specimens are determined to be the S&M species in these genera, then all the

sites for these species will receive the appropriate buffers since they are Category A and B species.

#### **Plants**

##### *Fungi*

Fungi surveys found three species with a total of 5 sites of Category B fungi species. Category B species require management of all known sites.

**Conclusions (for Saddled Again timber sale):** Identification of high priority sites for species management has not been necessary.

#### **Findings (for Surveyor Mountain (Unit 36-2) timber sale):**

##### **Animals**

##### *Great Gray Owl*

##### *Mollusks*

Specimens of mollusks thought to be in the genus *Vespericola* were collected and sent to regional taxa experts for verification. If these specimens are determined to be one of the S&M species in this genus (*Vespericola pressleyi* or *V. shasta*), then all the sites for these species will receive the appropriate buffers since they are both Category A species.

#### **Plants**

##### *Fungi*

Fungi surveys found two species with a total of 2 sites of Survey and Manage fungi species. One species is a Category B species, which requires management of all known sites. This species received a 60 foot radius no enter buffer. The other species was a Category D species, which requires management of high-priority sites. This species is rare on the resource area and received a 60 foot no enter buffer.

**Conclusions (for Surveyor Mountain (Unit 36-2) timber sale):** High priority sites for species management are being identified.

## **Riparian Reserves (RMP/ROD, Appendix K, page K-2)**

### **Expected Future Conditions and Outputs**

(See also Aquatic Conservation Strategy Objectives)

- Provision of habitat for special status and SEIS special attention species.

### **Implementation Monitoring**

**Monitoring Question 1:** Are watershed analyses being completed before on-the-ground actions are initiated in Riparian Reserves?

**Monitoring Requirement:** The files on each year's on-the-ground actions will be checked annually to ensure that watershed analyses were completed prior to project initiation and to ensure the concerns identified in the watershed analysis were addressed in the project's Environmental Assessment (EA).

**Monitoring Performed:** Review of project files and EAs.



**Findings:** Watershed analyses have been completed for nearly all BLM managed lands west of Highway 97. The KFRA staff have started a watershed analysis that covers 112,000 acres in the Gerber Block.

**Conclusions:** Watershed analyses were completed for all projects having activities within Riparian Reserves. Recommendations and objectives of the watershed analysis were addressed in the EAs and in contract stipulations.

**Monitoring Question 2:** Is the width and integrity of the Riparian Reserves (RR) being maintained?

**Monitoring Requirement:** At least 20 percent of management activities within the KFRA will be examined prior to project initiation and re-examined following project completion, to determine whether the width and integrity of the Riparian Reserves (RR) were maintained.

**Monitoring Performed:** Site visits to three projects within or adjacent to RRs were conducted. These included the Spencer Creek thin, the Bull Springs salvage, and the Harpold Riparian juniper treatment. Additional visits were made to juniper treatment areas along ephemeral streams that did not have designated RRs.

**Observations/Findings:** The no entry zone along Spencer Creek was effective. The buffer along the intermittent tributary to Spencer Creek may have been unnecessary, as the density of white fir along that stream will continue to affect the vigor of pines.

The small RRs within the Bull Springs timber sale were effective. Although dead trees were harvested from within the smaller of the two RRs (an area no larger than a few hundred square feet, one of the few areas along the watercourse that did not have a road where the stream channel would be expected), no machinery entered the area.

The RR within the Harpold Riparian treatment consisted of the stream channel and banks. Two stream crossings were built perpendicular to the channel. Some rehabilitation of the skid trails leading to these crossings will be required.

**Conclusions/Recommendations:**

If properly designed, vegetation treatments adjacent to watercourses can have beneficial effects on riparian vegetation and limited detrimental effects to riparian and aquatic values. Development and implementation of BMPs and Project Design Features is important, and should be done in the early part of the planning process.

**Monitoring Question 3:** What silvicultural practices are being applied to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain ACS objectives?

**Monitoring Requirements:** The Annual Program Summary will report what silvicultural practices are being applied in order to attain ACS objectives. See Watershed Restoration Projects and Riparian Habitat Enhancement, for a description of the silvicultural prescriptions applied in FY 2001.

**Monitoring Performed:** The riparian thin along Spencer Creek continued, and slashbusting occurred along Long Prairie Creek as part of the fuels reduction program.

**Monitoring Question 4:** Are management activities in Riparian Reserves consistent with SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives?

**Monitoring Requirement:** At least 20 percent of the activities that are conducted or authorized within Riparian Reserves will be reviewed in order to identify whether the actions

were consistent with the SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives. In addition to reporting the results of this monitoring, the Annual Program Summary will also summarize the types of activities that were conducted or authorized within Riparian Reserves.

**Monitoring Performed:** The Spencer Creek thin, the Bull Springs salvage, and the Harpold Riparian juniper treatment were visited by the resource area hydrologist or a team of interdisciplinary specialists.

**Findings:** See response to question 2.

**Conclusion:** The silvicultural activities were consistent with the SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives.

**Comment/Discussion:** See the Aquatic Conservation Strategy section of the Annual Program Summary for a discussion of the activities that were conducted or authorized in Riparian Reserves.

**Monitoring Question 5:** Are new structures and improvements in Riparian Reserves constructed to minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations, and accommodate the 100-year flood?

**Monitoring Requirement:** All new structures and improvements within a Riparian Reserve will be monitored during and after construction to ensure that it was constructed to: minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations and accommodate the 100-year flood.

**Monitoring Performed:**

No new structures or improvements were constructed in Riparian Reserves in FY 2001.

**Monitoring Question 6:**

A) Are all mining structures, support facilities and roads located outside the Riparian Reserves?

B) Are those located within the Riparian Reserves meeting the objectives of the Aquatic Conservation Strategy?

C) Are all solid and sanitary waste facilities excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with Supplemental Environmental Impact Statement Record of Decision Standards and Guidelines, and resource management plan management direction?

**Monitoring Requirement:** All approved mining Plans of Operations will be reviewed to determine if: A) both a reclamation plan and bond were required, B) structures, support facilities and roads were located outside of Riparian Reserves, or in compliance with management action/direction for Riparian Reserves if located inside the Riparian Reserve, C) and if solid and sanitary waste facilities were excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with RMP management direction.

**Monitoring Performed:** None; there are no mining claims in the Klamath Falls RA.



**Monitoring Question 7:** Are new recreation facilities within the Riparian Reserves designed to meet, and where practicable, contribute to Aquatic Conservation Strategy Objectives? Are mitigation measures initiated where existing recreation facilities are not meeting Aquatic Conservation Strategy Objectives?

**Monitoring Performed:** An evaluation of existing recreation facilities inside Riparian Reserves has not been completed to date.

**Monitoring Question 8:** Are new livestock handling and/or management facilities located outside Riparian Reserves? Are existing livestock handling and/or management facilities within the Riparian Reserves meeting the Aquatic Conservation Strategy Objectives?

**Monitoring Performed:** An evaluation of existing livestock handling and management facilities in Riparian Reserves has not been completed to date.

## **Late-Successional Reserves (RMP/ROD, Appendix K, page K-4)**

### **Expected Future Conditions and Outputs**

- Development and maintenance of a functional, interacting, Late-Successional, and old-growth forest ecosystem in Late-Successional Reserves
- Protection and enhancement of habitat for Late-Successional and old-growth forest-related species including the northern spotted owl

### **Implementation Monitoring**

**Monitoring Question 1:** What is the status of the preparation of assessments and fire plans for Late-Successional Reserves?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #1.

**Monitoring Performed:**

The status of the development of the resource area wide LSR assessment was reviewed.

**Findings:** A single Late-Successional Reserve Assessment is in preparation that will assess all 19 of the reserves designated for late-successional forest values within the resource area. Data on current conditions within each of the reserves have been collected in previous fiscal years. Along with historical descriptions and harvest data, these data served as a basis for written assessments of conditions in each reserve. Editing formatted each of these individual assessments similarly, and management recommendations will be finalized during FY 02. The Late-Successional Reserve Assessment will then be submitted to the Regional Ecosystem Office (REO) for review and approval.

**Conclusion:** RMP requirements will be met in FY 2002.

**Monitoring Question 2:**

- A) What activities were conducted or authorized within Late-Successional Reserves (LSRs) and how were they compatible with the objectives of the LSR plan?
- B) Were the activities consistent with SEIS ROD Standards and Guides, RMP management direction, and Regional Ecosystem Office review requirements and the LSR assessment?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #2.

**Monitoring Performed:** Review of activities conducted or authorized within Late-Successional Reserves (LSRs).

**Findings:** No activities occurred within LSRs, since the late-successional reserve assessment is not yet complete.

**Conclusion:**

No activities occurred, since the late-successional reserve assessment is not yet complete.

**Monitoring Question 3:** What is the status of development and implementation of plans to eliminate or control non-native species, which adversely impacts LSRs?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #3.

**Monitoring Performed:** Review of species lists from each unmapped LSR, and review of the noxious weed management program.

**Findings:** Noxious weed management is not a habitat manipulation activity that requires a Late-Successional Reserve Assessment before implementation. Standards and Guides for LSRs direct us to evaluate the impacts of nonnative species currently within reserves, and to develop plans for control or elimination of species that are inconsistent with LSR objectives.

Vascular plant inventories revealed only four nonnative plant species that frequently occur in the LSRs. Bull thistle (*Cirsium vulgare*), mullein (*Verbascum thapsus*), western salsify (*Tragopogon dubius*), and cheat grass or downy brome (*Bromus tectorum*) were found in physically disturbed areas within LSRs. These species are not targeted for control by the resource area noxious weed management program because they are abundant and widespread in disturbed sites, and decline in abundance without disturbance. Therefore, these species are not inconsistent with LSR objectives. None of the noxious weed species that are targeted for control were found within LSRs.

**Conclusion:** Impacts of nonnative species have been evaluated, and the species that currently exist within the reserves, are not inconsistent with LSR objectives. Noxious weed management activities and prevention strategies on lands near and adjacent to late-successional reserves will reduce the probability that other nonnative species will become established within the reserves.

**Monitoring Question 4:**

A) Are the effects of existing and proposed livestock management and handling facilities in Late-Successional Reserves being evaluated to determine if LSR objectives are met?

B) Are livestock management and/or handling facilities relocated where LSR objectives are not met?

**Monitoring Requirement:** The Annual Program Summary will report the status of evaluations of existing and proposed livestock management facilities inside LSRs, to determine if reserve objectives are being met. The APS will report on the status of relocating those facilities where LSR objectives cannot be met.

**Monitoring Performed:** Review of existing and proposed livestock management facilities within the resource area.

**Findings:** No existing or proposed livestock management facilities are located within LSRs in the resource area.



## Matrix (RMP/ROD, Appendix K, page K-5)

### Expected Future Conditions and Outputs

- Production of a stable supply of timber and other forest Commodities.
- Maintenance of important ecological functions such as dispersal of organisms, carryover of some species from one stand to the next, and maintenance of ecologically valuable structural components such as downed logs, snags, and large trees.
- Assurance that forests in the Matrix provide for connectivity between mapped Late-Successional Reserves.
- Provision of habitat for a variety of organisms associated with early and Late-Successional forests.

### Implementation Monitoring

**Monitoring Question 1:** Are suitable numbers of snags, coarse woody debris, and green trees being left, following timber harvest, as called for in the SEIS ROD Standards & Guidelines and RMP management direction?

**Monitoring Requirements:** At least 20 percent of timber sales in the resource area will be examined by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters, and distribution within harvest units. Snags and green trees left following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

The same timber sales will be inventoried pre- and post-harvest to determine if SEIS Record of Decision and RMP down log retention direction and protection buffers for special status and SEIS special attention species have been followed.

Monitoring Performed: One timber sale, Grenada East, was monitored during FY 2001. Table 43 displays all the timber sales that have been monitored from FY 1997 through FY 2001.

**Table 43. Timber Sale Monitoring**

FY Monitored	Timber Sale Name	Acres	Monitored By	Pre/Post Treatment Stand Exams Completed	Soil Monitoring Completed
1997	Too Frosty	459	KFRA ID Team	Yes	Post Treatment
1998	Lower Spencer Salvage	1000+	REO & KFRA ID Team	No	No
1999	Kakapoo Stew	397	REO & KFRA ID Team	Yes	Pre & Post Treatment
2000	Stukel Mtn.	230	KFRA ID Team	Yes	No
2001	Grenada East	1440	Silviculture / Wildlife / Timber	Yes	Post Treatment
2001	Muddy Tom	400	Soils	Yes	Pre Treatment



Findings:

Results of prior year timber sale monitoring are shown in earlier Annual Program Summaries. Table 43 below summarizes the stand attribute data that was gathered from post-treatment stand exams on the Grenada East timber sale.

**Snags**

The KFRA RMP requires leaving approximately 1.9 snags per acre (1.4 eastside) to meet the 60 percent optimum cavity nesting habitat for cavity nesters. An additional 0.7 snags per acre must also be left to meet the protection buffer requirement for white-headed and black-back woodpeckers. Snags for the white-headed woodpecker need to be at least 15 inches DBH and in the soft category. For the black-back woodpecker, the snags must be at least 17 inches DBH and in the hard category. Silvicultural prescriptions in the KFRA have generally called for leaving a total of 2.6 snags per acre (1.4 eastside) or more with at least one greater than 20 inches DBH. For the Grenada East Timber Sale, an average of 4-5 snags were left per acre with a range from 0 up to 62 snags per acre in heavy mortality pockets. As Table 38 below indicates, a large number of green trees per acre (78+/acre of trees > 7"DBH) are left which allows for potential snag recruitment, many exceeding 15 inches in diameter.

**Coarse Woody Debris (CWD)**

Page C-40 of the Northwest Forest Plan Record of Decision (ROD) states, "Until standards are developed as described above, the following guidelines apply in areas of **regeneration harvests...**" and sets the down wood requirement at 120 linear feet of logs per acre greater than or equal to 16 inches in diameter and 16 feet long in



**Figure 18. Monitoring – Matrix Cut, Four Years Later**



**regeneration harvest** areas only. The guideline for partial harvest, as stated on page 23 of the KFRA RMP and page C-40 of the ROD is, "In areas of partial harvest, the same basic guidelines should be applied, but they should be modified to reflect the timing of stand development cycles where partial harvesting is practiced." The KFRA needs to determine how they plan to monitor down wood through different stand development cycles where partial cutting (density management) is practiced to meet this standard and guideline.

Although it has been clarified that density management sales do not have to meet the 120 linear feet ROD requirement, Table 44 indicates that some large CWD is still being retained. On the Grenada East Timber Sale, approximately 14 linear feet of Class 1 & 2 logs and 122 linear feet of Class 3, 4, & 5 logs were left that met the minimum requirements ( $\geq 16''$  diameter and 16' long). An additional 140 linear feet of logs  $\geq 16''$  diameter and  $\geq 8'$  long were also found. Table 38 indicates that there is a significant amount of smaller diameter CWD that contributes to fuel loading. The overall fuel loading objective in the area is approximately 8-10 tons per acre. FY 2001 monitoring indicated an average fuel loading of approximately 4.2 tons per acre.

### **Green Tree Retention**

The RMP requires that an average of 16 to 25 Westside (5-10 eastside) large green trees per acre be left. Plan maintenance (see 1999 APS) clarification indicates that this requirement is for regeneration harvests only. To date, the KFRA has only implemented one 39-acre regeneration harvest unit. Most harvest prescriptions have consisted of either density management or mortality salvage prescriptions. In both prescriptions, a majority of the large green trees are retained. For the Grenada East Timber sale, as Table 38 indicates, on average, 78 trees per acre (7" – 30"+ DBH) were left. With the exception of regeneration harvest areas, the KFRA intends to concurrently implement uneven-aged management prescriptions, maintain late-successional structural components, and address forest health issues in the Matrix. That is why the stand exam data reveals an complete array of tree sizes.

### **Tree Species Composition**

The KFRA is tracking species composition changes through pre- and post-treatment stand exams to help determine trends in species composition changes. Many of the stands contain a higher percentage of shade tolerant species (white fir) than historically found (Leiburg, 1899). This is primarily a result of past harvesting practices—where much of the overstory pines and Douglas-fir were removed—and fire suppression, which tends to favor the shade tolerant white fir. An objective in most silvicultural prescriptions is to retain the healthy pines and Douglas-fir. The data from the Grenada East Timber Sales indicates that the post-treatment stands contain primarily ponderosa pine and white fir (approximately 35%) with a smaller percentage of Douglas-fir (12%), incense cedar (14%).

### **Canopy Closure**

The KFRA is monitoring canopy closure changes through pre- and post-treatment stand exams. Biologists often use canopy closure to evaluate whether a particular stand meets nesting, roosting, or foraging habitat for different species. To date, using the density management prescription, canopy closure after harvest on westside timber sales has averaged 65 to 86 percent, which is a level that meets the requirements for some late-successional dependent species. On the Grenada East Timber Sale, the canopy closure after harvest averaged 50% with a range from 0% in the openings to 100% in the lightly thinned areas. Generally, forested areas located on the westside of the KFRA and south of highway 66 are drier and more open. This partially accounts for the lower average canopy closure.

**Table 44. Summary of Post Treatment Stand Characteristics For Grenada East Timber Sale Monitored in FY 2001**

Structure	Young Multi-Strata (Scattered Remnant Large Trees)			
Canopy Closure	Average = 50% Range 0 – 100%			
Basal Area / Acre (sq ft/ac)	Average = 86 Range 0-220			
Trees/Acre	Average = 264 Range = 0-1717			
0-6" DBH	15.6 (DF) / 31.9 (IC) / 3.8 (LP) / 57.2 (PP) / 77.4 (WF) Total = 185.8			
7"-18" DBH	16.6 (DF) / 4.1 (IC) / 34.2 PP / 13.9 (WF) Total = 68.8			
19"-30" DBH	1.4 (DF) / 0.1 (IC) / 5.7 (PP) / 0.1 (WF) Total = 8.4			
>30" DBH	0.3 (DF) / 0.1 (IC) / 0.1 (PP) / 0.1 (WF) Total = 0.6			
Tree Species Composition	12.8%(DF) / 13.7 % (IC) / 1.4% (LP) / 36.8% (PP) / 35.1%(WF)			
Fuel Loading Tons/Acre - (Only logs > 5" diameter and 8' long )	4.2 Tons/Acre Range 0 – 57.2 tons/acre			
Coarse Woody Debris (Total Length/Acre)  ≥16" diameter, ≥ 16' long Decay Class 1 & 2 Logs (NFP Criteria = 120 FT.)	14 feet			
≥16" diameter, ≥ 16' long Decay Class 3, 4, & 5	122			
≥16" diameter, ≥ 8' long All Decay Classes	140 feet			
≥ 5" diameter, ≥8' length All Decay Classes	423 feet Range 0 – 4,105			
Snags/Acre	Ht.	DBH		
		7"-14" DBH	≥15" DBH	Totals
Class 1 & 2 Snags	≥ 51ft.	1.87	0.68	2.55
	≤ 50 ft.	2.03	0.00	2.03
Class 3, 4, & 5 Snags	≥ 51ft.	0.76	0.86	1.62
	≤ 50 ft.	2.04	0.54	2.58
Totals	≥51	2.63	1.54	4.17
	<50	4.07	0.54	4.62
				Range 0 – 62.28



### **Basal Area**

The KFRA monitors basal area changes for a number of reasons. First, there has been considerable research on optimizing stand densities and growth using basal area to monitor stand stocking levels. The Growth and Yield Model (ORGANON) that was used to help determine the ASQ is highly dependent upon basal area before and after harvest to determine growth rates. The silvicultural prescriptions for all sales contain basal area objectives. Post-treatment monitoring is done to determine if those objectives were met. Second, there has been a significant amount of research, particularly on drier sites, defining basal area levels where stands are susceptible to insect outbreaks. The KFRA uses these threshold levels in the silvicultural prescriptions to assure that silvicultural treatments are adequate to improve resiliency of the stand and reduce insect outbreaks. Generally, the higher elevation stands have a higher basal area threshold than the drier, low elevation stands. The objective for the Grenada East Timber Sale was to retain, on the average, between 90 and 120 square feet of basal area per acre. The stand exam indicated an average basal area of 86 square feet per acre was retained with a range from 0 to 220 (Table 38).

### **Conclusion:**

This 2001 annual program summary contained some clarification in the Plan Maintenance addressing the requirement of leaving an average of 16 to 25 large green trees in regeneration harvests only. The KFRA has complied with the snag, coarse woody debris, and green tree requirements to date. A quality control program has been initiated to assure that silvicultural prescriptions modeled are actually being implemented on the ground. This is normally monitored using basal area. Post-harvest monitoring indicates retention of many desirable late-successional characteristics. The wildlife staff is monitoring biological use of post-treatment stands by late-successional dependent species (see Wildlife Section).

**Monitoring Question 2:** Are timber sales being designed to meet ecosystem goals for the Matrix?

**Monitoring Requirements:** At least 20 percent of the files on each year's timber sales within Matrix will be reviewed annually to determine if ecosystem goals were addressed in the silvicultural prescription.

**Monitoring Performed:** Only one timber sale was monitored during FY 2001; Grenada East. Table 37, displays sales monitored in FY 1997 through 2001.

**Findings:** All timber sales are designed to meet ecosystem goals for the Matrix and address resource concerns raised in both the respective Watershed Analysis and Environmental Assessment. All resources are analyzed for impacts including wildlife, soils, hydrology, plants, social, cultural, as well as others. All timber sales incorporate the applicable Best Management Practices (BMPs) described in Appendix D of the RMP. Post-treatment monitoring of all sales to date indicates that most BMPs have been addressed in the Environmental Analysis and incorporated into the Timber Sale Contract.

**Monitoring Question 3:** Are Late-Successional stands being retained in fifth-field watersheds in which federal forest lands have 15 percent or less Late-Successional forest?

**Monitoring Requirements:** All proposed regeneration harvest timber sales in watersheds with less than 15 percent Late-Successional forest remaining will be reviewed prior to sale to ensure that a watershed analysis has been completed.

**Monitoring Performed:** A revised 15% analysis is currently in progress that will be published concurrent with the completion of the Klamath Falls Resource Area third year evaluation.

**Findings:** For all three Watershed Analyses, an analysis was done to determine the amount of Late-Successional Forest in the watershed on federal lands. For both the Spencer Creek Watershed and the Topsy/Pokegama/Hamaker Landscape Analysis Area, the percent of Late-Successional Forest in the watershed was above 15%. Further direction has required that the Topsy/Pokegama/Hamaker Landscape Analysis Area be analyzed at the fifth field watershed level, which means 4 different watersheds within the Topsy/Pokegama/ Hamaker Landscape need further evaluation. The results of that analysis are being finalized as part of the Third Year Evaluation.

One unique feature of the KFRA, as indicated by post-treatment monitoring thus far, is that many of the stands after treatment are still capable of contributing to late-successional habitat within the watershed, due to the residual stand characteristics being left. Silvicultural prescriptions have been implemented that addressed two primary objectives: first, maintenance of late-successional habitat; and second, treating overstocked stands to reduce risks of catastrophic fire and/or insect events. There are some watersheds where the residual late-successional habitat may be close to 15% and still experiencing forest health concerns that could benefit from some light understory treatments.

## Fire/Fuels Management (RMP/ROD, Appendix K, page K-24)

### Expected Future Conditions and Outputs

- Provision of the appropriate suppression responses to wildfires in order to meet resource management objectives and minimize the risk of large-scale, high intensity wildfires.
- Utilization of prescribed fire to meet resource management objectives. (This will include, but not be limited to, fuels management for wildfire hazard reduction, restoration or desired vegetation conditions, management of habitat, and silvicultural treatments.)
- Adherence to smoke management/air quality standards of the Clean Air Act and State Implementation Plan standards for prescribed burning.

### Implementation Monitoring

**Monitoring Question 1:** Have analysis and planning been completed to allow some natural fires to burn under prescribed conditions?

**Findings:** No analysis and planning were completed for FY 2001 natural fires. BLM managers have not completed adequate planning or analysis to allow natural fires to burn under certain prescribed conditions.

**Monitoring Question 2:** Do wildfire suppression plans emphasize maintaining Late-Successional habitat?

**Findings:**

Wildfire Situation Analyses will be prepared for all wildfire and suppression actions that escape initial attack.

**Conclusions:** In FY 2001, one wildfire that originated on private land, escaped initial attack.. The Indian Springs fire overran 120 acres of public lands in the additional burning period. No additional area was burned

**Monitoring Question 3:** Are Wildfire Situation Analyses being prepared for wildfires that escape initial attack?



**Findings:** Wildfire suppression plans include protecting multiple resources including Late-Successional habitat. The plans and assessments for Late-Successional Reserves address this issue.

**Monitoring Question 4:** What is the status of interdisciplinary team preparation and implementation of fuel hazard reduction plans?

**Findings:** Fuels and Fire Management Plans continue to be developed. Analysis is being done in conjunction with a Late-Successional Reserve Assessment that is being completed by the interdisciplinary team. These LSR assessments will contain recommendations for each LSR as to fuel treatments. Some LSRs will require extensive actions, while others will receive no treatments at the present time.

## **Air Quality (RMP/ROD, Appendix K, pages K-6 and K-24)**

### **Expected Future Conditions and Outputs**

- Attainment of national Ambient Air Quality Standards, Prevention of Significant Deterioration goals, and Oregon Visibility Protection Plan and Smoke Management Plan goals.
- Maintenance and enhancement of air quality and visibility in a manner consistent with the Clean Air Act and the State Implementation Plan.

## **Implementation Monitoring**

**Monitoring Question 1:** Were efforts made to minimize the amount of particulate emissions from prescribed burns?

**Monitoring Requirements:** At least twenty percent of prescribed burn projects carried out in FY 2001 will be randomly selected for monitoring to assess what efforts were made to minimize particulate emissions, and whether the environmental analysis that preceded the decision to burn addressed the questions set forth in the SEIS discussion of Emission Monitoring (pages 3&4-100).

**Monitoring Performed:** In FY 98, the Lakeview District began a program of aerial observation of burns located near smoke sensitive areas during marginal weather events. In a number of situations, the smoke plume was videotaped as a record.

**Findings:** Of the 3,264 acres of prescribed burning conducted, 780 acres were implemented in the spring to reduce the number of emissions. Higher moisture content in the larger fuels and duff means less fuel available to burn. Spring burns are conducted when the atmosphere is unstable; thereby decreasing the impact of smoke in sensitive areas. Of the remaining 2,484 acres, fall burning occurred on areas of light fuel loadings. As related to harvest units, logging methods required the yarding of tops and limbs attached. Some of this material was chipped and utilized. The material not in locations suitable to chip were burned early fall to provide for complete and quick consumption. Smoldering is not a problem using this method.

**Conclusion:** Efforts were made to reduce particulate emissions from prescribed burns by conducting those that could be conducted in the spring and still meet hazard reduction objectives.

**Monitoring Question 2:** Are dust abatement measures used during construction activities and on roads during BLM timber harvest operations and other BLM commodity hauling activities?

**Monitoring Requirements:** At least 20 percent of the construction activities and commodity hauling activities carried out in FY 2001 and subject to the current RMP will be monitored to determine if dust abatement measures were implemented where needed.

**Monitoring Performed:** Grenada East and Muddy Tom Sales. These areas have been monitored since harvest operation started.

**Findings:** All timber sales in the Klamath Falls Resource Area include a road watering specification as part of the contract. Water is required to abate dust during any road construction phase of the contracts. Impacts on air quality from road construction and timber hauling were of short duration, local nature, and had little impact on regional air quality.

- The Grenada East Sale is in a water deficient location. The principle access road is partially graveled and cindered. Water was used sparingly.

**Monitoring Question 3:** Are conformity determinations being prepared prior to activities, which may contribute to a new violation of the national Ambient Air Quality Standards, increase the frequency or severity of an existing violation, or delay the timely attainment of a standard?

**Monitoring Requirements:** The Annual Program Summary will address Implementation Question 3.

**Monitoring Performed:** In FY 98, the Lakeview District began a program of aerial observation of burns located near smoke sensitive areas during marginal weather events. In a number of situations, the smoke plume was videotaped as a record.

**Findings:** Preplanning of prescribed fire projects, use of current weather data, and onsite observations during prescribed burning have reduced frequency and severity of smoke from prescribed fire violating Air Quality Standards.

## Water and Soils (RMP/ROD, Appendix K, page K-8)

### Expected Future Conditions and Outputs

- Restoration and maintenance of the ecological health of watersheds. See Aquatic Conservation Strategy Objectives.
- Improvement and/or maintenance of water quality in municipal water systems.
- Improvement and/or maintenance of soil productivity.
- Reduction of existing road mileage within Key Watersheds, or at a minimum, no net increase.

### Implementation Monitoring

**Monitoring Question 1:** Are site specific Best Management Practices, identified as applicable during interdisciplinary review, carried forward into project design and execution?

**Monitoring Requirement:**

All management activities using best management practices will be monitored to determine whether best management practices are incorporated into the project design. At least twenty



percent of the timber sales, silviculture projects, or other ground disturbing activities stratified by management category will be randomly selected for monitoring to determine whether or not best management practices were implemented as prescribed. The selection of management actions to be monitored will be based on beneficial uses likely to be impacted, and for which best management practices are being prescribed.

**Monitoring Performed:** In FY2001, four projects on the resource area that are expected to have ground disturbing activities were selected for quantitative soil bulk density and areal extent of soil disturbance monitoring. These four projects are: Hamaker Mechanical Slashbuster Fuel Reduction, Short Lake Mountain Mechanical Juniper/Fuel reduction, Kilgore Mechanical Juniper/Fuel reduction, and the Muddy Tom Timber Sale mechanical harvest. An additional project, Grenada East Timber Sale mechanical harvest was monitored for areal extent of soil disturbance.

A resource area forester and hydrologist conducted an informal review of units within the Frosty One timber sale that were near the West Fork of Johnson Creek and salvage operations in the Spencer Creek watershed.

**Findings:**

The resource area is measuring the areal extent of soil disturbance and changes in soil bulk density for pre treatment samples as compared to post treatment samples. To accomplish this, a statistically significant number of pre treatment baseline soil samples were collected and processed for these four projects. When these projects are complete, post treatment soil bulk density samples will be collected, processed, and compared to the pre treatment samples to determine if soil resources are being detrimentally impacted as per RMP and regional standards and guidelines for detrimental soil impacts (Meurisse 1997).

Following treatment, the Grenada East Timber Sale skid trails were mapped using a GPS (Geographical Positioning System) unit. These skid trails were classified and mapped as either primary skid trails or secondary skid trails. This quantitative assessment is then compared to RMP and regional standards and guidelines for areal extent of detrimental soil impacts (Meurisse 1997). Interdisciplinary field review of these skid trails will occur in FY 2002.

The informal field review found that:

- On the Frosty One Timber Sale, one temporary stream crossing (of slash and debris) had yet to be removed from the West Fork of Johnson Creek;
- A road was decommissioned as part of the Frosty One timber sale using a winged ripper as specified in the timber sale contract. In lieu of using a winged ripper, an excavator could have been used to pull the road back away from the stream;
- Waterbars on the same decommissioned road should have extended to the inboard ditch or the ditch filled in to prevent diversion of flow paths; and,
- A skid trail that was used to remove salvaged timber was contributing to runoff generation and downstream channel incision.

**Conclusion:**

Resource Management Plan (RMP) objectives for limiting soil disturbance have been met. Future timber sale and road decommissioning plans will be adjusted to incorporate the insight from the informal field review.

**Comment/Discussion:**

Quantifying soil disturbance enables resource area staff to determine whether resource management plan objectives for protecting soil resources are being met. Soil monitoring on the resource area is a long term program. Results from areal extent monitoring on the Grenada East Timber Sale determined that detrimental soil disturbance averaged for all units within the project was 7%. These findings fall within the RMP and regional standards and guidelines for areal extent of detrimental soil disturbance of not greater than 20% of the project area.

To date, quantitative soil monitoring has been conducted on three resource area timber sales: Kakapoo Stew timber sale in FY1998, FY 1999, with analysis in FY 2000; Frosty Too timber sale in FY1997-1998; and Grenada East timber sale in FY 2000, and FY2001. The results from soil monitoring on these timber sales will be considered in the layout of future resource area timber sales, and in the design of future soils monitoring programs.

The results of the informal field review will be incorporated in the Upper Spencer EA. The skid trail that is causing runoff generation will be removed from the skid trail network and rehabilitated with coarse woody debris (in order to collect sediment and slow runoff). Future road decommissioning projects will be designed to address the impacts of road fill on riparian areas and to ensure that road runoff and diversion of flow paths is minimized.

### Monitoring Question 2:

Are the prescribed actions, programs and interagency coordination efforts called for in the NFP Record of Decision Standards and Guidelines and resource management plan management direction being conducted?

**Monitoring Performed:** Review of timber sale and project files and monitoring of ground disturbing activities.

### Findings:

Management actions and programs are being conducted to meet or move towards desired future water and soils conditions. Riparian reserve treatments are being implemented to move towards Aquatic Conservation Strategy objectives. In coordination with Oregon Department of Environmental Quality, the resource area is supporting the development of TMDLs (Total Maximum Daily Loads) and WQMPs (Water Quality Management Plans) for streams within the resource area. Soil productivity requirements are being maintained and improved in timber sales and other projects. Existing road mileage in the Spencer Creek watershed is being reduced.

**Monitoring Question 3:** What watershed analyses have been or are being performed? Are watershed analyses being performed prior to management activities in Key Watersheds?

**Findings:** The following table (Table 45) displays the status of watershed analysis.

**Conclusion:** Watershed analyses have been completed for all key watersheds and for essentially all BLM managed lands west of Highway 97. A watershed analysis covering approximately 112,000 acres on the eastside of the resource area (Gerber-Willow Valley

**Table 45. Status of Watershed Analysis**

Watershed Analysis Completed	Key Watershed	Completion Date
Spencer Creek Watershed Analysis	Spencer Creek & Clover Creek	August 1995
Jenny Creek Watershed Assessment and Analysis	Jenny Creek	February 1995
Topsy-Pokegama Landscape Analysis	None	July 1996
Watershed Analysis in Process	Key Watershed	Expected Completion
Gerber/Willow Valley	None	2002 or 2003



Watershed) was initiated in FY 2000. The Spencer Creek watershed analysis will eventually be updated with the new GIS Hydrology theme, the recently completed Spencer Creek Road Inventory, and new water temperature data. Portions of the Topsy-Pokegama Landscape Analysis will be updated in the Affected Environment section of the Upper Klamath River Management Plan/EIS.

**Monitoring Question 4:**

What is the status of identification of in-stream flow needs for the maintenance of channel conditions, aquatic habitat, and riparian resources?

**Findings:** The BLM is cooperating with PacifiCorp and numerous other stakeholders to develop and implement studies as part of the relicensing of the Klamath Hydroelectric Project. Some of these studies focus on the relationships between instream flow, aquatic habitat, water quality, and riparian vegetation. These studies will be used to determine flow regimes that will be incorporated in the new license for the Project.

**Monitoring Question 5:** What watershed restoration projects are being developed and implemented?

**Findings:** In addition to the projects described in the Aquatic Conservation Strategy, other restoration projects are being developed as part of the Upper Spencer EA, the Klamath River Management Plan/EIS, and other project level analyses. In the Wood River wetlands, 0.7 miles of river channel were realigned to historic channel dimensions and form. Figure 19



Figure 19. Monitoring Restoration of Wetlands at Wood River



displays the results of photo-monitoring of reestablishment of wetland vegetation following Wood River channel realignment work.

Road inventories have been completed in the Spencer Creek watershed and in the Klamath River canyon, and work is underway to begin a road inventory in the Gerber and Willow Valley watersheds. These projects help prioritize roads needing treatment.

**Conclusion:** Watershed restoration projects are being developed and implemented to meet the RMP and ACS objectives.

#### **Monitoring Question 6:**

What fuel treatment and fire suppression strategies have been developed to meet Aquatic Conservation Strategy Objectives?

**Findings:** BMPs for the protection of soils, water, and riparian resources are being implemented during prescribed fire activities. Silvicultural prescriptions involving understory thinning treatments are being implemented in Riparian Reserves to reduce potential fuel loads to decrease the risk of catastrophic fires. These treatments are designed to improve forest health and meet the Aquatic Conservation Strategy objectives.

**Conclusions:** Fuel treatment prescriptions are being implemented to meet ACS and RMP objectives.

#### **Monitoring Question 7:**

What is the status of development of road or transportation management plans to meet Aquatic Conservation Strategy Objectives?

##### **Findings:**

A Transportation Management Plan (TMP) has been developed for lands covered by the NFP ROD. An inventory of existing road conditions and their potential to effect the attainment of ACS objectives was completed in the Spencer Creek watershed and in the Klamath River canyon. Funding was obtained to undertake similar road inventory work in the Gerber and Upper Lost River watersheds. This data will be used to supplement the existing TMP. A TMP is currently underway for the eastside of the resource area. Analysis of roads is done during timber sale planning to determine their effects upon ACS objectives.

**Conclusions:** A Transportation Management Plan has been developed and will be revised and supplemented with additional data from road inventories and project analyses.

#### **Monitoring Question 8:**

What is the status of preparation of criteria and standards which govern the operation, maintenance, and design for the construction and reconstruction of roads?

**Findings:** A Transportation Management Plan has been developed for lands covered by the NFP ROD. Roads, culverts, and bridges are designed, constructed and maintained in accordance with policies and standards set forth in BLM 9100 Series Manuals and the Best Management Practices (BMP). Maintenance levels are assigned to each road reflecting the appropriate maintenance that fits the Transportation Management Objectives (TMO) for the planned management activity.

The ongoing road sediment study in the Spencer Creek watershed will help refine the standards for road construction and maintenance. The study will examine the effects of several parameters including slope, road surface material, and drainage factors.

##### **Conclusions:**

Progress is being made on development of the criteria and standards for roads.



**Monitoring Question 9:**

What is the status of the reconstruction of roads and associated drainage features identified in watershed analysis as posing a substantial risk? What is the status of closure or elimination of roads to further Aquatic Conservation Strategy Objectives, and to reduce the overall road mileage within all watersheds? If funding is insufficient to implement road mileage reductions, are construction and authorizations through discretionary permits denied to prevent a net increase in road mileage in Key Watersheds?

**Findings:** During FY 2001, 1.36 miles of roads were closed to vehicle traffic through East Grenada and Bull Springs Timber Sales. Also, 2.42 miles of roads were improved across the Resource Area including 1.80 miles of Gerber recreation roads, 0.50 miles of Topsy Road, and 0.12 miles of Klamath River Stateline Road.

**Conclusions:** Progress is being made in reducing overall road mileage and density.

**Monitoring Question 10:** What is the status of reviews of ongoing research in Key Watersheds to insure that significant risk to the watershed does not exist?

**Monitoring Requirement:** Review of existing and proposed research activities in Key Watersheds and Riparian Reserves.

**Findings:**

No formal research activities are being conducted in Key Watersheds or Riparian Reserves in the Klamath Falls Resource Area.

**Monitoring Question 11:** What is the status of evaluation of recreation, interpretive and user-enhancement activities/facilities to determine their effects on the watershed? What is the status of eliminating or relocating these activities/facilities when found to be in conflict with Aquatic Conservation Strategy objectives?

**Findings:** An evaluation of existing recreation facilities inside Riparian Reserves has not been completed to date.

**Monitoring Question 12:** What is the status of cooperation with other agencies in the development of watershed-based Coordinated Resource Management Plans and other cooperative agreements to meet Aquatic Conservation Strategy objectives? What is the status of cooperation with other agencies to identify and eliminate wild ungulate impacts which are inconsistent with attainment of Aquatic Conservation Strategy objectives?

**Findings:** A Coordinated Resource Management Plan was developed for the Spencer Creek Watershed in 1994 by a group consisting of several government agencies, private companies and individuals. Many individual and cooperative projects have been implemented to address concerns from the plan. The group continues to meet on a regular basis to address resource management concerns on both public and private land.

Resource concerns on private and public lands west of Highway 97 are also addressed through the Pokegama Cooperative Habitat Project, which is an alliance of government agencies, private companies, citizens groups and organizations, and individuals.

No detrimental impacts from wild ungulates have been identified. The Pokegama Cooperative Habitat Project group and the BLM will address any impacts if they are identified.

The Gerber/Willow Valley CRMP begun in FY 2000, is expected to be completed in FY02.

**Conclusions:** Cooperative agreements and planning efforts are being developed to meet RMP and ACS objectives.

**Monitoring Question 13:** Are management practices achieving the goal of maintaining long-term site productivity by avoiding, minimizing, or ameliorating soil compaction, displacement, surface erosion, and loss of organic material, including coarse woody debris?

**Monitoring Requirement:** All management activities using best management practices will be monitored to determine whether best management practices are incorporated in the project design.

At least twenty percent of the timber sales, silviculture projects, or other ground disturbing activities stratified by management category will be randomly selected for monitoring to determine whether or not best management practices were implemented as prescribed. The selection of management actions to be monitored will be based on beneficial uses likely to be impacted, and for which best management practices are being prescribed.

**Monitoring Performed:**

In FY2001, four projects on the resource area that are expected to have ground disturbing activities were selected for quantitative soil bulk density monitoring and areal extent of soil disturbance monitoring. These four projects are: Hamaker Mechanical Slashbuster Fuel Reduction, Short Lake Mountain Mechanical Juniper/Fuel reduction, Kilgore Mechanical Juniper/Fuel reduction, and the Muddy Tom Timber Sale mechanical harvest. An additional project, East Grenada Timber Sale mechanical harvest was monitored for areal extent of soil disturbance.

**Findings:** See Findings under Water and Soils, Implementation Question 1.

**Conclusions:** See Conclusion under Water and Soils, Implementation Question 1.

**Comment/Discussion:** The issue of soil health on the resource area is being investigated by quantifying disturbance levels. Concerns have been raised on the resource area about excessive soil compaction possibly occurring with repeated use of a mechanical harvester, mechanical slashbuster, or combination of both in a forest stand or juniper woodland over time. Use of a mechanical harvester/slashbuster results in greater areal ground disturbance since it is not confined to skid roads, although in theory a mechanical harvester reportedly causes less soil compaction since it exerts less pounds per square inch of force/pressure than other ground-based harvesting machinery. Since use of a mechanical harvester/slashbuster is becoming more and more common and is the most economical choice for density-management treatment of forest stands and juniper woodlands, the resource area is measuring the areal extent of soil disturbance and changes in soil bulk density in representative ground disturbing projects to evaluate soil health.

Findings from monitoring done in 1998 in one timber sale area suggest that detrimental soil compaction, as defined by Forest Service Region 6 and resource area standards and guidelines, may have occurred. Findings from monitoring done in a different timber sale area in 1998, 1999 and completed in 2000 suggest that the threshold for detrimental compaction (15 percent increase in bulk density) was approached. Areal extent of soil disturbance monitoring conducted in a timber sale in FY2000 and FY2001 was within the standards and guideline recommendations. However, multiple years of monitoring mechanical harvester/slashbuster use are needed before drawing any conclusions about soil compaction. Consequently, the resource area will continue monitoring representative projects using quantitative methods in order to accumulate more data from which conclusions about the areal extent and degree of soil compaction resulting from the use of a mechanical harvester can be made. Copies of the soil monitoring reports, detailing methods and results, can be obtained at the resource area office.



## Wildlife Habitat (RMP/ROD, Appendix K, page K-9)

### Expected Future Conditions and Outputs

- Maintenance of biological diversity and ecosystem health to contribute to healthy wildlife populations, consistent with BLM's Fish and Wildlife 2000 plan and other nationwide initiatives.
- Maintenance of desired conditions in each special habitat (such as meadows, wetlands, and cliff/talus slopes), plus desired conditions in buffers at least 100 feet wide around dry meadows, and wooded swamps.

### Implementation Monitoring

**Monitoring Question 1:** Are suitable (diameter, length and numbers of) snags, coarse woody debris and green trees being left, in a manner that meets the needs of species and provides for ecological function in harvested areas as called for in the SEIS Record of Decision Standards and Guidelines and RMP management direction?

**Monitoring Requirement:** At least 20 percent of regeneration harvest timber sales in each resource area will be examined by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters, and distribution within harvest units. The measure of distribution of snags and green trees will be the percent in the upper, middle and lower thirds of the sale units monitored. Snags and green trees remaining following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

The same timber sales will be inventoried pre- and post-harvest to determine if SEIS Record of Decision and RMP down log retention direction has been followed.

**Monitoring Performed:** Muddy Tom Timber Sale was scheduled for monitoring. Since the logging activities were not completed due to extremely dry weather, the monitoring was also delayed.

**Monitoring Question 2:** Are special habitats being identified and protected?

**Monitoring Requirement:** At least 20 percent of BLM actions, within each resource area, on lands including or near special habitats will be examined to determine whether special habitats were protected.

**Monitoring Performed:** Surveys for Survey and Manage species such as the great gray owl and terrestrial mollusks are conducted prior to ground-disturbing activities. A number of great gray owl and blue-gray tail-dropper sites have been found on the resource area. Potential aquatic mollusk sites were also surveyed as part of the Klamath River Canyon herptile study.

**Findings:** Special habitats are identified and protected through project design that avoids special habitats or by creating reserves within the project areas. Buffers and seasonal restrictions are also included in the project design features. Wildlife biologists often participate in the actual layout to ensure that special habitats get proper recognition and protection. Biologists also participate in the fuels program to identify objectives of the treatment that are compatible with special habitats.

**Monitoring Question 3:** What is the status of designing and implementing wildlife restoration projects?

**Monitoring Performed:** Oregon Hunters Association (OHA) volunteered to collect bitterbrush seed for future plantings. They collected approximately 25 pounds of seed in 2001. The Mule Deer Foundation has been very interested in the projects and has agreed to future contributions to benefit the project. The verbal agreement occurred in 2001 but the financial contribution was received in December of FY 02. Projects completed to improve mule deer habitat in FY 2001 were: 1) planting of Bitterbrush and Mtn mahogany seedlings at three different locations, 2) mechanical and manual removal of juniper trees on big-game winter ranges, and 3) manual removal of encroaching juniper in meadow areas.

**Findings:** Several projects have been designed and implemented to improve habitat for wildlife. Fuels reduction projects were designed around eagle nest sites and range improvement projects were implemented to benefit sage grouse and landbirds.

**Monitoring Question 4:** What is the status of designing and constructing wildlife interpretive and other user-enhancement facilities?

**Monitoring Performed:** The Wood River Wetland Project

**Findings:** Plans are being developed to design a wildlife interpretive center in the wetlands area. Early discussions are also occurring to develop programs along the Upper Klamath River.

**Monitoring Question 5:** Are elk herds on BLM-administered lands stable or increasing?

**Monitoring Performed:** Various wildlife surveys.

**Findings:** According to Oregon Department of Fish and Wildlife (ODFW) informal herd counts, elk are increasing in number in the Klamath Falls Resource Area. BLM participated in an aerial survey of elk in the Keno unit in February of 2001. This was a cost shared project with ODFW. BLM cooperated by contracting the helicopter. Wild horses were also inventoried during the flight.

**Monitoring Question 6:** Are range conditions stable or is there obvious competition between resources?

**Monitoring Performed:**

See the response to the "Grazing Management" question #1 in regards to studies and monitoring that address the range condition stability.

In addition, one wildlife specific rangeland monitoring study type has been performed over the past 10 years on some priority wildlife winter range (or potential winter range) allotments - the Modified Cole Browse study. This study measures the post growth and post livestock grazing utilization on key browse species in the fall. Then, as a comparison, measurements are taken of the post winter and pre-growth utilization level in the spring (i.e. measures winter use by wildlife). These measurements are periodically performed on wedgeleaf ceanothus and serviceberry on the KFRA's westside and on antelope bitter brush on the eastside.

**Findings:**

In general, all studies have found range conditions to be stable to improving on the vast majority of the BLM administered lands in the KFRA. Also, see the response to Question #1 in "Grazing Management".

Summarized findings to date are that livestock (cattle) and wild horses (westside only) make little use of any of the shrub species, with a couple exceptions. Cattle and, in particular, wild horses, will make occasional significant use (i.e., moderate or higher) on serviceberry on the



westside; neither make significant summer use of the wedgeleaf ceanothus. On the eastside of the KFRA, cattle will make similar occasional significant use (moderate to heavy) on bitterbrush, but only in the few areas that receive significant livestock use after approximately August 15<sup>th</sup>.

**Conclusions:**

Rangeland conditions are apparently stable or improving on most of the BLM administered lands within the KFRA. The recently completed Ecological Site Inventory showed this to be true on the Gerber Block, which comprises over 2 of the KFRA. Also, see response to Question #1 in "Grazing Management".

There are no particular resource concerns with shrub use within the KFRA. The westside use on the serviceberry is insignificant because that shrub is an insignificant part of the vegetation communities. Wedgeleaf ceanothus is vastly more abundant and is not being impacted at present by summer livestock (or wildlife) use. On the eastside, the areas that have received moderate or higher bitterbrush use are extremely small and in areas that are rarely, if ever, used by wintering deer or elk. No studies have found any significant resource competition issues between large wildlife herbivores and livestock on the BLM lands.

**Monitoring Question 7:**

Are facilities or improvements functional and providing desired management results?

**Monitoring Requirement:** Maintain and check management facilities (such as guzzlers, springs, road closures, etc.) periodically to ensure that they are functioning properly.

**Monitoring Performed:** Currently, 9 cisterns and 24 spring developments in the resource area are being maintained for wildlife. The cisterns are located throughout the resource area in areas where water is not plentiful. In the past, maintenance of these water sources was through a challenge cost share with the Oregon Department of Fish and Wildlife. In 2001, these springs and guzzlers were checked by volunteers, fire crew members and a BLM biologist. Major repairs were scheduled through the range program.

In the Gerber area, approximately 96 goose nesting-boxes were maintained with help from an eagle scout project.. Nest boxes are monitored for success and for needed repairs. Additional areas that could support nesting structures and water developments are periodically reviewed.

Seasonal road closures are visited bi-annually. Permanent road closures are checked on an annual basis.

**Findings:**

Severe damage to locks on road closure gates throughout the KFRA is a continual problem. Many of the locks are being shot and the gates opened, and/or vehicles are driving around the closures.

**Conclusions:** More time and effort needs to be given to wildlife improvements. Project files have been updated with current maps created in GIS. Due to the severe and decreased effectiveness of the Gerber area closures, a project to replace the existing cable closures with more effective pipe gate closures is being considered. A challenge cost share project proposal with US Timberlands to eliminate unneeded roads on the westside of the resource area is still being considered. The roads would be closed to benefit wildlife habitat and alleviate maintenance problems. An increased monitoring effort will be proposed with help from the Oregon department of Fish and Wildlife, Oregon State Police, and local conservation groups. This may alleviate some of the closure violations and damage to the gates.

Road closure maintenance in the Surveyor Mtn area will be coordinated with the Upper Spencer Creek Road inventory study. This project plans to treat erosion problems on identified roads and repair road closures.

All water improvements for wildlife will be revisited and reviewed in the FY 2002 summer. A complete report with updated maps will be produced in the fall. A monitoring schedule will be revised upon completion of the report.

**Monitoring Question 8:** Is the BLM protecting special habitats as provided for in the RMP?

**Monitoring Requirement:** Examine 20 percent of BLM actions on lands containing or near special habitats to determine whether special habitats were protected as provided for in the RMP. Monitor the effects of BLM management on wildlife species using a variety of methods. Coordinate surveys of game species with the Oregon Department of Fish and Wildlife. Conduct monitoring of other species and habitats as needed, such as neotropical migratory birds by vegetation community, individual species surveys when needed, and vegetation surveys as part of the timber and range management activities.

**Monitoring Performed:** Riparian zones are marked and managed according to the Aquatic Conservation Strategy. Raptor nest sites are protected with buffers and nest season restrictions. Special habitats (such as talus slopes, seeps and springs, etc.) are identified during the planning phase of the activities and protected during the design and implementation phase using the Best Management Practices identified in the RMP. Other habitats such as meadows important to great gray owls are identified during surveys, and buffers are established during timber sale preparation. Landbird surveys have been initiated in special habitats identified as a concern by the Western Working Group of Partners in Flight.

Surveys are being conducted for landbirds in the Klamath River Canyon, Wood River, grazing allotments, and Gerber Reservoir in cooperation with the Klamath Bird Observatory and Pacific Southwest Research Station of the USFS. Partners in the project included World Wildlife Fund, Point Reyes Bird Observatory, Klamath Basin National Wildlife Refuge, and Winema NF. Data compiled will be used for BLM's evaluation of the FERC relicensing of power projects on the Klamath River and grazing allotments.

A study of landbirds in habitats including sagebrush, juniper/sage, old growth juniper, and juniper/ponderosa pine, was continued. The purpose of this multi-year study is to evaluate the conditions and trends within these habitat types for assessment of management actions related to juniper harvest treatments.

The carnivore study was continued which involves the use of baited camera stations to detect specific "target" species including the American marten, fisher, lynx, and wolverine. Species found included the American Marten, bobcat, bird species and a black bear.

**Findings:** District Designated Reserve Buffers (DDRBs) have been established around all spotted owl nest cores, per RMP guidance. The need for special spotted owl habitat silvicultural prescriptions within these DDRBs is evaluated during timber sale planning for potential habitat improvement.

Boundaries for great gray owl buffers were posted around approximately 275 acres of meadows and natural openings in 1999. Within the Muddy Tom Timber Sale area, a portion of the buffer area was identified for habitat enhancement and a silvicultural prescription was developed. In FY 2000, pre-treatment stand exams were conducted within these great gray owl meadow buffers. Photo-monitoring plots will be established in 2001.



Studies of landbirds are ongoing and site-specific analysis has not yet been completed.

**Conclusions:** Special habitats specified in the RMP are being provided for as they are identified.

**Monitoring Question 9:** Is the average width of undisturbed buffers retained following timber harvest and site preparation activities as specified in the RMP?

**Monitoring Requirement:** Determine average buffer widths by measurements at approximately equidistant points around the affected unique habitat within each timber sale unit.

**Monitoring Performed:**

Buffers are checked during the post timber sale reviews on 20 percent of the sales. Nest buffers for owls, eagles, and accipiters are visited annually during nesting and reproductive success monitoring efforts.

**Findings:** Buffers are marked and managed according to NFP and RMP guidelines. The average width of buffers established according to the NFP and RMP are being retained following timber harvests.

## **Fish Habitat (RMP/ROD, Appendix K, page K-10)**

### **Expected Future Conditions and Outputs**

(See also Aquatic Conservation Strategy Objectives)

- Maintenance or enhancement of the fisheries potential of streams and other waters consistent with BLM's Fish and Wildlife 2000 Plan, the Bring Back the Natives initiative, and other nationwide initiatives.
- Rehabilitation and protection of at-risk fish stocks and their habitat.

### **Implementation Monitoring**

**Monitoring Question 1:** Are at-risk fish species and stocks being identified?

**Monitoring Requirements:** The Annual Program Summary will report on the status of watershed analysis to, their habitat within individual watersheds, and restoration project needs.

**Monitoring Performed:** Efforts continued on the Gerber/Willow Valley Watershed Analysis during FY 2001. Work on at risk fish species in the analysis area was conducted. Two sucker species (shortnose and Lost River) are listed as endangered under the Endangered Species Act, as amended. Two additional species are managed as a Bureau sensitive species; Klamath River redband trout and Klamath largescale sucker. These fish species are present, to varying extents, within the analysis area.

**Findings:** One watershed analyses effort was conducted in FY 2001 that identified at-risk fish species and stocks.

**Monitoring Question 2:** Are fish habitat restoration and enhancement activities being designed and implemented, which contribute to attainment of Aquatic Conservation Strategy Objectives?

**Monitoring Requirements:** The Annual Program Summary will report on the status of the design and implementation of fish habitat restoration and habitat activities.

**Monitoring Performed:** In the Spencer Creek drainage, the riparian thinning of dense white fir was completed in FY 2001. The project covered approximately 100 acres and was intended to enhance old growth conditions. The riparian thinning is recommended in the Spencer Creek Watershed Analysis.

Extensive project planning for Upper Spencer Creek channel restoration was conducted in 2001. Over six miles of Spencer Creek was reviewed, from the mouth of Miners Creek to the base of Buck Lake, in order to assess the current channel condition. Seventy cross-sectional profiles and pebble counts were collected. The channel cross-sections will aid in developing specific channel treatments. Proposed instream actions may include rock weirs, log structures, bankfull bench treatments, and riparian vegetation enhancement. Instream large woody debris enhancement was recommended in the Spencer Creek Watershed Analysis.

Resource area staff maintained approximately 0.25 mile of the lower Wood River, to promote more natural meander patterns and depths. Side channel outlets along the length of the river segment were further filled in to reduce flow leakage from the mainstem channel prior to the mouth exit to lake. The main channel, along the new channel length below the bridge, was excavated an additional 1 Ω – 2 feet in order to increase channel depth and thus enhance boating access. The channel restoration work is anticipated to improve fish habitat and water quality (see Wood River section).

In the Gerber Watershed, the Barnes Valley Creek low water ford reconstruction was completed in FY 2001. Installation of rock weirs above and below the crossing were constructed in order to reset the riffle/pool ratio and alter channel slopes in favor the new crossing. This shift is anticipated to create a sediment depositional area at the crossing location, thus improving vehicular crossing conditions and secure the sub-pavement concrete blocks. The project should help endangered shortnose suckers to pass the ford at lower flows and improve fluvial process above and below the crossing.

Staff from both the KFRA and the Klamath Falls office of the Bureau of Reclamation (BOR) identified low winter flows in Miller Creek as an adverse impact to redband trout and endangered suckers. As result of proposed alteration for raising Gerber Reservoir the BOR is proposed studying instream flow needs for fisheries resources in Miller Creek to augment aquatic habitat and prevent stranding in winter.

Extensive fish habitat restoration and enhancement activities have been proposed within the Klamath River Management Plan (EIS) boundary. The Klamath River Management Plan will address current impacts to fisheries habitats and proposed protection, mitigation, enhancements in order to meet ACS objectives and W&SRA Fisheries ORV objectives.

**Findings:**

Fish habitat restoration and enhancement activities are being designed and implemented to contribute towards attainment of ACS objectives.

**Monitoring Question 3:**

Are potential adverse impacts to fish habitat and fish stocks being identified?

**Monitoring Requirements:** The Annual Program Summary will report on the status of cooperation with federal, tribal and state fish management agencies to identify and eliminate impacts associated with poaching, harvest, habitat manipulation and fish stocking which threaten the continued existence and distribution of native fish stocks inhabiting federal lands. The APS will identify any management activities or fish interpretive and other user-enhancement facilities that have been detrimental effects on native fish stocks.



**Monitoring Performed:** There has been considerable cooperation between state, federal, and tribal biologists on the work being conducted and work being proposed at the Wood River project (see Wood River section). The project will have long term benefits to fish habitat but there have been short-term losses in habitat quality such as increased sediment which have been identified. These impacts have been mitigated in a number of ways (see Wood River section).

A rotary screw trap was operated, by resource area staff, in the Wood River through March of FY 2001. The objective of the trapping was to identify the multiple fish species present and migratory behavior, which potentially could be adversely affected by instream channel realignment of the Wood River. Results of the trapping operations are documented in the Annual Monitoring Report for the Wood River, 2001.

There has also been considerable cooperation between state, federal, and tribal biologists on the proposed Klamath River Management Plan (EIS) boundary to identify existing and potential adverse impacts to fish habitat and fish stocks.

The resource area staff have been cooperating with U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, U.S. Forest Service, The Nature Conservancy, U.S. Bureau of Reclamation, and U.S. Geological Survey-Biological Resources Division on redband trout and bull trout working groups to develop and implement scientifically based management strategies for these species.

**Findings:** Adverse impacts to fish habitat and fish stocks are being identified and mitigation performed.

**Monitoring Question 4:** Are habitat improvement projects and opportunities being identified?

**Monitoring Requirements:** At least twenty percent of the files on each year's timber sales, and other relevant actions, will be reviewed annually to evaluate documentation regarding fish species and habitat and related recommendations and decisions in light of policy and NFP ROD Standards and Guidelines and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

**Monitoring Performed:** A review of project proposals, including watershed analysis, is performed throughout the year. Habitat improvement projects are typically designed as part of the proposed action or alternatives to the proposed action.

On the Klamath River Management Plan extensive time was spent reviewing aerial photography and additional GIS information in order to develop extensive recommendation for improving/enhancing the Klamath River within the Klamath River Management Plan (EIS) boundary. Proposed channel dimension treatments, bank treatments, and riparian vegetation treatments have been developed as a result of this review.

In preparation for the Spencer Creek analysis, staff spent about 12 months conducting Rosgen Level II surveys (channel profiles and pebble counts) in order to assess channel condition and develop baseline information on future habitat improvement projects in Spencer Creek.

Significant time has been spent time in Gerber, Spencer Creek, and Klamath River areas reviewing existing road/stream crossings for extension of channel connections from road networks and sedimentation problems in most of the fish bearing reaches on BLM administered lands.

**Findings:**

Habitat improvement projects and opportunities are being identified and designed into the overall management of the resource area.

**Monitoring Question 5:** Are fish populations adequate to provide present and expected future recreational needs?

**Monitoring Requirements:** Monitor lakes and fish populations, and stocks if necessary.

**Monitoring Performed:** The KFRA has several excellent recreational fisheries: the lower Wood River, the Klamath River, Four Mile Creek, Miller Creek, Spencer Creek, reservoirs of the Gerber/Willow Valley Watershed, and Topsy reservoir. Most stream fisheries are for redband trout, but Fourmile Creek contains brook trout as well. Reservoir fisheries are for multiple cold water and warm water game fish species.

**Findings:** Recreational needs for fisheries are growing in Klamath County. The resource area staff will need to assess and consult with ODFW and USFWS on these streams and watersheds in light of the increasing recreational demand. The potential exists for improving habitat to protect recreational fisheries against adverse impacts in order to continue to meet recreational needs. Miller Creek, Spencer Creek, and the Klamath River are on the EPA=s (303d) list for impaired water quality for excessive sediment and temperature.

## **Special Status and SEIS Special Attention Species Habitat (RMP/ROD, Appendix K, page K-11)**

### **Expected Future Conditions and Outputs**

- Protection, management, and conservation of federal listed and proposed species and their habitats, to achieve their recovery in compliance with the Endangered Species Act and Bureau special status species policies.
- Conservation of federal candidate and Bureau sensitive species and their habitats so as not to contribute to the need to list, and recover the species.
- Conservation of state listed species and their habitats to assist the state in achieving management objectives.
- Maintenance or restoration of community structure, species composition, and ecological processes of special status plant and animal habitat.
- Protection of Bureau assessment species and SEIS special attention species so as not to elevate their status to any higher level of concern.

### **Implementation Monitoring**

**Monitoring Question 1:**

A) Are special status species being addressed in deciding whether or not to go forward with forest management and other actions?

B) During forest management and other actions that may disturb special status species, are steps taken to mitigate or avoid disturbances?

**Monitoring Requirement:** At least 20 percent of the files on each year's timber sales, range improvements, grazing decisions, and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding special status species and related recommendations and decisions in light of the Endangered Species Act requirements, policy and SEIS Record of Decision Standards and Guidelines, and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed



on the ground after completion to ascertain whether the mitigation was carried out as planned.

**Monitoring Performed:** Review of the following projects: Slim Chicken timber sale, Saddled Again timber sale, and Surveyor Mountain (Unit 36-2) timber sale.

**Findings (for Slim Chicken timber sale):**

**Animals**

*Northern Spotted Owl*

The Chicken Hills spotted owl site was monitoring within the sale area.

*Great Gray Owl*

Surveys in 1998 and 1999 determined that there was no suitable habitat for Great Gray Owls in the area of this timber sale.

*Lynx*

One carnivore study sample station was monitored for lynx and other carnivore species within the timber sale area.

*Mollusks*

Terrestrial

Under the existing standards and guides during fall 2000, four Survey and Manage (S&M) terrestrial mollusk species *Prophysaon dubium* (tail dropper), *Prophysaon coeruleum* (blue-gray tail dropper), *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband) had potential to occur within the resource area. Pre-disturbance surveys for terrestrial mollusks were conducted in the fall of 2000. Only two species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband), which potentially occur in the resource area require pre-disturbance surveys under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2001, surveys according to protocols of potential habitat were conducted on the Slim Chicken Timber Sale Area.

The majority of Survey and Manage mollusk site locations were captured with a Global Positioning System (GPS), and entered into the regional corporate database for S&M, referred to as ISMS (Interagency Species Management System).

Although blue-gray tail dropper (*Prophysaon coeruleum*) sites were located during the fall of 2000, this species was removed from the Survey and Manage list in Oregon by the January 2001 S&M SEIS. Therefore management of these sites is not required. Several specimens of mollusks thought to be in the genera *Pristiloma* and *Vespericola* were collected and sent to regional taxa experts for verification. If these specimens are determined to be the S&M species in these genera (*Pristiloma arcticum crateris*, *Vespericola pressleyi* or *V. shasta*), then the sites for these species will receive the appropriate buffers.

Aquatic

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. There is no potential habitat within the Slim Chicken timber sale for aquatic mollusks.

## Plants

### *Vascular Plants*

Vascular plant surveys were conducted in the timber sale area and surrounding areas in 1998. No special status vascular plant species were located.

### *Non-Vascular Plants*

Fall 2000 Survey and Manage (S&M) fungi surveys were conducted to the then existing protocols ("Survey Protocols for Seven Protection Buffer Fungi Version 1.3") in the Slim Chicken timber sale area. Under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001), pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species.

The majority of Survey and Manage site locations were flagged and captured with GPS and entered into ISMS. However, some locations could not be referenced using GPS because of technical difficulties capturing satellite signals in the field.

Fungi surveys found seven species with a total of 52 sites of Category B fungi species which require management of all known sites. Based on professional judgement, Appendix J2 in the Northwest Forest Plan Final SEIS, and appropriate literature, buffer for each of these species were determined. The sites for three species received 60 foot radius no enter buffers, the sites for three other species received 60 foot radius no enter/no cut buffers, and the sites for one species received 25 foot no enter/no cut buffers.

**Conclusions (for Slim Chicken timber sale):** Special status species are being addressed in deciding whether or not to go forward with forest management and other actions, and steps are taken to mitigate or avoid disturbances.

### **Findings (for Saddled Again timber sale):**

#### **Animals**

##### *Northern Spotted Owl*

The Buck Mountain spotted owl site was monitored within the timber sale area.

##### *Great Gray Owl*

Surveys were conducted according to protocols for this species during FY 2001. Surveys detected potential Great Gray Owl meadow habitat within this timber sale area. These meadows received the appropriate buffers.

#### *Mollusks*

##### Terrestrial

Under the existing standards and guides during fall 2000, four Survey and Manage (S&M) terrestrial mollusk species *Prophysaon dubium* (tail dropper), *Prophysaon coeruleum* (blue-gray tail dropper), *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband) had potential to occur within the resource area. Pre-disturbance surveys for terrestrial mollusks were conducted in the fall of 2000. Only two species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband), which potentially occur in the resource area require pre-disturbance surveys under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2001, surveys according to protocols of potential habitat were conducted on the Saddled Again timber sale area.



Although blue-gray tail dropper (*Prophyaon coeruleum*) sites were located during the fall of 2000, this species was removed from the Survey and Manage list in Oregon by the January 2001 S&M SEIS. Therefore management of these sites is not required. Several specimens of mollusks thought to be in the genera *Pristoloma*, *Vespericola*, and *Monadenia* were collected and sent to regional taxa experts for verification. If these specimens are determined to be the S&M species in these genera, then the sites for these species will receive the appropriate buffers.

#### Aquatic

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. There is no potential habitat within the Saddled Again timber sale for aquatic mollusks.

### **Plants**

#### *Vascular Plants*

Botanical inventories have documented the occurrence of green-flowered ginger, *Asarum wagneri*, in portions of this timber sale. Green-flowered ginger is a low-growing, aromatic, perennial herbaceous species which is rare across its range, but where it occurs it occupies extensive areas at various levels of abundance. It was recommended that timber harvest occur over a layer of snow in areas where green-flowered ginger abundance is high in order to limit disturbance to the ground and plant populations.

#### *Non-Vascular Plants*

Fall 2000 Survey and Manage (S&M) fungi surveys were conducted to the then existing protocols ("Survey Protocols for Seven Protection Buffer Fungi Version 1.3") in the Slim Chicken timber sale area. Under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001), pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species.

The majority of Survey and Manage site locations were flagged and captured with GPS, and entered into ISMS. However, some locations could not be referenced using GPS because of technical difficulties capturing satellite signals in the field.

Fungi surveys found three species with a total of 5 sites of Category B fungi species, which require management of all known sites. Sites for one species received a 60 foot radius no enter buffer, sites for one species received a 60 foot no enter/no cut buffer, and sites for one species received a 25 foot no enter/no cut buffer.

**Conclusions (for Saddled Again timber sale):** Special status species are being addressed in deciding whether or not to go forward with forest management and other actions, and steps are taken to mitigate or avoid disturbances.

**Monitoring Performed:** Surveyor Mountain (Unit 36-2) timber sale.

**Findings (for Surveyor Mountain (Unit 36-2) timber sale):**

#### **Animals**

##### *Northern Spotted Owl*

Surveys detected no spotted owl nest sites in or near this timber sale unit. Therefore no spotted owl monitoring was necessary.

#### *Great Gray Owl*

Surveys were conducted throughout the Surveyor Mountain Area. No nest sites or owls have been located therefore no buffers were needed.

#### *Mollusks*

##### Terrestrial

Under the existing standards and guides during fall 2000, four Survey and Manage (S&M) terrestrial mollusk species *Prophysaon dubium* (tail dropper), *Prophysaon coeruleum* (blue-gray tail dropper), *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband) had potential to occur within the resource area. Pre-disturbance surveys for terrestrial mollusks were conducted in the fall of 2000. Only two species of S&M terrestrial mollusks, *Pristiloma arcticum crateris* (Crater Lake tightcoil), and *Helminthoglypta hertleini* (Oregon Shoulderband), which potentially occur in the resource area require pre-disturbance surveys under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001). Survey protocols for these two species only require surveys in suitable habitat. During the spring of 2001, surveys according to protocols of potential habitat were conducted in Section 36 of the Surveyor Mountain timber sale area.

Although blue-gray tail dropper (*Prophysaon coeruleum*) sites were located during the fall of 2000, this species was removed from the Survey and Manage list in Oregon by the January 2001 S&M SEIS. Therefore management of these sites is not required. Several specimens of mollusks thought to be in the genera *Pristoloma*, *Vespericola*, and *Monadenia* were collected and sent to regional taxa experts for verification. If these specimens are determined to be the S&M species in these genera, then the sites for these species will receive the appropriate buffers.

##### Aquatic

Three undescribed S&M aquatic mollusk species in the genus *Fluminicola* (*Fluminicola* sp. #1, #3, and #16) are known to occur on this resource area. There is no potential habitat within the Surveyor Mountain timber sale for aquatic mollusks.

#### **Plants**

##### *Vascular Plants*

Vascular plant inventories have found green-flowered ginger (*Asarum wagneri*), a Bureau sensitive species, in some of the higher elevation units of this timber sale. Those units that contain a high density of green-flowered ginger will be recommended for snow logging. Unit 36-2 does not contain a high density of green-flowered ginger, therefore no special project design features were proposed.

##### *Non-Vascular Plants*

Fall 2000 Survey and Manage (S&M) fungi surveys were conducted to the then existing protocols ("Survey Protocols for Seven Protection Buffer Fungi Version 1.3") in Section 36 of the Surveyor Mountain timber sale area. Under the Record of Decision and Standards and Guides for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USFS and BLM 2001), pre-disturbance surveys are required for only one fungus species, and the Klamath Falls Resource Area is outside the range of that species.

The majority of Survey and Manage site locations were flagged and captured with GPS, and entered into ISMS. Some locations could not be referenced using GPS because of technical difficulties capturing satellite signals in the field.



Fungi surveys found two species with a total of 2 sites of Survey and Manage fungi species. One species is a Category B species, which requires management of all known sites. This species received a 60 foot radius no enter buffer. The other species was a Category D species, which requires management of high-priority sites. This species is rare on the resource area and received a 60 foot no enter buffer.

**Conclusions (for Surveyor Mountain (Unit 36-2) timber sale):** Special status species are being addressed in deciding whether or not to go forward with forest management and other actions, and steps are taken to mitigate or avoid disturbances.

**Monitoring Question 2:** Are the actions identified in plans to recover species being implemented in a timely manner?

**Monitoring Requirement:** Review implementation schedule and actions taken annually, to ascertain if the actions to recover species were carried out as planned.

**Monitoring Performed:** Programs were reviewed for compliance with recovery plans.

Findings:

**Animals**

Recommendations contained in the NFP and consultations on individual projects were followed closely.

**Plants**

No Federally listed threatened or endangered plant species occur on BLM land administered by the Klamath Falls Resource Area. Therefore, no recovery plans have been developed for plant species, which occur in the resource area. The resource area botanist has evaluated the recovery plan and actions for the federally listed (endangered) Applegate's milkvetch (*Astragalus applegatei*). This species is endemic to the Klamath Basin, but no known populations occur on federal lands.

**Conclusions:** Actions identified in plans to recover species are being implemented in a timely manner.

**Monitoring Question 3:** What coordination with other agencies has occurred in the management of special status species?

**Monitoring Requirement:**

The Annual Program Summary will address Implementation Question 3.

**Monitoring Performed:** An overall program review, plus a review of the Wood River Wetland restoration.

**Findings (for Program Review):**

USFWS consultation for listed species; REO coordination of SEIS special attention species (Survey and Manage); Challenge Cost Share project with OSU to molecular review of the taxonomic status of red-root yampah (*Perideridia erythrorhiza*), a special status plant species; and a research project on yellow rails at the Four-mile Creek Wetland and the Wood River Wetland is in cooperation with the Oregon Natural Heritage Program (ONHP). We have also cooperated with adjacent landowners (UST and Boise Cascade) on management of spotted owls when the nest site is on or near property lines. These practices include agreeing on core areas, coordinating timber management and silvicultural practices, and monitoring of nesting activity before and after the project.

**Findings (for Wood River Wetland restoration):**

As phase III of the Wood River channel restoration continued, KFFO continued to communicate with FWS, ODFW, the Klamath Tribes, Oregon Division of State Lands,

Bureau of Reclamation, and several private organizations about the project and the work being completed. This was necessary as conditions at the project were constantly changing.

**Conclusions:** Coordination with other agencies has occurred in the management of special status species.

**Monitoring Question 4:** What land acquisitions occurred or are underway, to facilitate the management and recovery of special status species?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 4.

**Monitoring Performed:** Reviewed potential land acquisitions.

**Findings:** No land acquisitions occurred or are underway, to specifically facilitate the management and recovery of special status species.

**Conclusions:** Land acquisitions have not occurred and are not underway, to facilitate the management and recovery of special status species.

**Monitoring Question 5:** What site-specific plans for the recovery of special status species were or are being developed?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 5.

**Monitoring Performed:** Program review.

**Findings:**

**Animals**

BLM, specifically the KFFO, is not currently involved in the development of any site-specific recovery plan.

**Plants**

No site specific plans for the recovery of special status plant species are or have been developed.

**Monitoring Question 6:** What is the status of analysis, which ascertains species requirements or enhances the recovery or survival of a species?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 6.

**Monitoring Performed:** Program review

**Findings:**

**Animals**

The KFFO continues to monitor all known sites for spotted owls, goshawks, and eagles. In addition we also survey potential habitat for spotted owls and great gray owls before we conduct any ground disturbing activity.

**Plants**

A Challenge Cost Share (CCS) project was initiated in FY 99 to establish experimental reintroduction sites for *Perideridia erythrorhiza* (red-root yampah - a Bureau sensitive species) on lands managed by each federal cooperator, using and testing propagation and cultivation techniques developed by ODA in 1997. Also, limited reciprocal transplanting



of east- and west-side individuals were conducted to advance our knowledge about functional genetic differences between east- and west-side populations of *P. erythrorhiza*. The final report was submitted in March 2001.

**Conclusions:**

Analyses that ascertain species requirements or enhances the recovery or survival of a species are ongoing.

**Monitoring Question 7:** What is the status of efforts to maintain or restore the community structure, species composition and ecological processes of special status plant and animal habitat?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 7.

**Monitoring Performed:** Program review.

**Findings:**

**Animals**

Timber harvest prescriptions continue to look at long term health of the ecosystem. The objectives of the prescriptions are to manage for a multi-storied stand that will be healthy and remain as habitat or return to functional habitat as soon as possible.

**Plants**

No efforts have been made specifically to maintain or restore the community structure, species composition and ecological processes of special status plant species habitat. However, the reintroduction of fire as an ecosystem process through the prescribed fire program may indirectly accomplish this objective since special status plant species are similarly adapted to fire as other plant species in the plant community of which they are a component.

Known sites of S & M species are managed to protect the area from ground disturbing activities.

**Conclusions:**

Long-term ecosystem health is addressed in management of the timbered land and rangelands.

## **Cultural Resources Including American Indian Values (RMP, Appendix O, page O-14 - O15, and Appendix R, page R-1)**

### **Expected Future Conditions and Outputs**

- Identification of cultural resource localities for public, scientific, and cultural heritage purposes.
- Consideration and protection of cultural resource values for future generations.
- Provision of information on long-term environmental change and past interactions between humans and the environment.
- Fulfillment of responsibilities to appropriate American Indian groups regarding heritage and religious concerns.

### **Implementation Monitoring**

#### **Monitoring Question 1:**

Are cultural resources being addressed in deciding whether or not to go forward with forest management and other actions? During forest management and other actions that may disturb cultural resources, are steps taken to adequately mitigate disturbances?

**Monitoring Requirements:** At least 20 percent of the files on each year's timber sales and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding cultural resources and American Indian values in light of requirement, policy and NFP Record of Decision Standards and Guidelines, and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

**Monitoring Performed:** Review of existing survey data for Fuels management projects.

**Findings (for Bly Mountain Timber Sale):** An Indefinite-Delivery, Indefinite-Quantity contract was prepared for fuels management projects. Two contractors were awarded the contract, which is designed to not exceed \$300,000 or three years. A review of existing data (Class I inventory) was conducted prior to implementation of the fire projects, then, the previously unsurveyed areas were 100% surveyed (Class III Inventory). It was found that the 100% of the 9,500 acres of fuels projects were surveyed. Approximately 24 new prehistoric cultural sites and 1 new historic cultural site were recorded during survey activity. In addition, 11 previously recorded cultural sites were relocated and the site report data was updated.

In the previously surveyed areas, an Archaeological Technician performed monitoring at the sites. Monitoring consisted of relocating sites, reestablishing flagging to outline site boundaries, and updating site location and site report forms. Once sites were relocated, site location/boundaries were downloaded into a geographical information system (GIS) database. Because the sites would be avoided during project activity, a "no effect" determination was made in consultation with the State Historic Preservation Officer.

#### **Conclusion (for Bly Mountain Timber Sale):**

Cultural resources were addressed in deciding whether or not to go forward with Fuels treatment projects



**Monitoring Question 2:** What mechanisms have been developed to describe past landscapes and the role of humans in shaping those landscapes?

**Findings:** No formal mechanisms were developed or employed during FY 2001 to describe past landscapes and the role of humans in shaping those landscapes. Site location data was collected during archaeological inventory and transferred into the geographic information system. This information will be used to analyze site location patterning with respect to current environmental variables and may prove useful for detecting human/environment interaction during the relatively recent past.

**Conclusion:** Due to limited funding and Klamath Tribal concerns, no archaeological excavations were conducted on lands administered by the Klamath Falls Field Office. Excavations often provide important data that can be used to interpret the roles humans have played in shaping past environments.

**Monitoring Question 3:** What efforts are being made to work with American Indian groups to accomplish cultural resource objectives and achieve goals outlined in existing memoranda of understanding and develop additional memoranda as needs arise?

**Findings:** The BLM consults with the Klamath Tribes on projects that could potentially impact cultural resources and Tribal values through a bi-monthly meeting with the Klamath Tribes Culture and Heritage Department. Extensive consultation is conducted via presentations to the Tribal Council for projects of serious concern to the Klamath Tribes. A Draft Memorandum of Understanding (Agreement) was developed to foster increased communication between the Klamath Tribes and the BLM, but has yet to be signed by the Klamath Tribes.

**Monitoring Question 4:**

What public education and interpretive programs were developed to promote appreciation of cultural resources?

**Findings:** Cultural resource specialists gave presentations at a high school career day, and for a group of foster children on Fishing Day.

## **Visual Resources (RMP/ROD, Appendix K, page K-15)**

### **Expected Future Conditions and Outputs**

- Preservation or retention of the existing character of landscapes on BLM-administered lands allocated for Visual Resource Management Class I and II management; partial retention of the existing character on lands allocated for Visual Resource Management Class III management and major modification of the existing character of some lands allocated for Visual Resource Management Class IV management.
- Continuation of emphasis on management of scenic resources in selected high-use areas to retain or preserve scenic quality.

### **Implementation Monitoring**

**Monitoring Question 1:** Are visual resource design features and mitigation methods being followed during timber sales and other substantial actions in Visual Resource Management Class II, III, and IV areas?

**Monitoring Requirements:** Twenty percent of the files for timber sales and other substantial projects in Visual Resource Management Class II and III areas will be reviewed to ascertain whether relevant design features or mitigating measures were included.

**Monitoring Performed:** All fiscal year 2001 timber sales and other substantial projects.

**Findings:** The Barnes Valley Creek 3C Road crossing construction project was completed in 2001. The area contains VRM Class II lands. During the EA review it was determined that no additional project measures were necessary to meet VRM Class II guidelines. The riparian area was rehabilitated after construction with fibrous matting and stabilizing willow plants to speed up the recovery process.

The KFRA conducted the Oak thin/Juniper Removal project in FY 2001 on two parcels of land within the Upper Klamath Wild and Scenic River corridor. Mitigation measures were identified during project planning and environmental analysis to protect and enhance the Outstandingly Remarkable Scenic Value (VRM class II lands). Analysis of the on-the-ground affects after project completion indicated that the mitigation measures were followed and the overall project met or exceeded expectations.

The Klamath Falls Forest Community Protection plan was reviewed. Some additional mitigation measures and project design features were added for protection of VRM class II and III lands within the area of this forest fuel reduction plan. The Mechanical (Fuel) Treatments plan was reviewed. Some additional project design features for VRM class II and III lands were added. The Dehlinger/Stukel Right-of-Way request was reviewed for protection of VRM class III lands on the west face of Stukel Mountain. No additional mitigation measures were required for this road construction/access request.

The Horton Rim/Dairy and Windy Ridge Rangeland Health Treatment and Urban Interface Protection plan was reviewed. Additional mitigation measures were added to protect VRM class III lands in the area between Dairy and Bonanza, OR.

The Upper Midway Juniper Treatment plan was reviewed. Additional mitigation measures were added to reduce impacts to VRM class III lands and recreation resources.

Several minor project actions for recreation were reviewed and additional mitigation or project design features to protect visual resources were incorporated as needed.

**Conclusion:** Visual resource design features and mitigation methods are being followed during forest health treatments planning and other substantial actions in Visual Resource Management Class II, III, and IV areas to ameliorate any adverse impacts from those projects on visual resources.

## **Rural Interface Areas (RMP/ROD, Appendix K, page K-17)**

### **Expected Future Conditions and Outputs**

- Consideration of the interests of adjacent landowners, including residents, during analysis, planning, and monitoring related to managed rural interface areas. These areas are defined as public lands within 1/4 mile of identified rural interface areas zoned for one to twenty acre lots. (These interests include personal health and safety, improvements to property and quality of life.)



## Implementation Monitoring

**Monitoring Question 1:** Are design features and mitigation measures developed and implemented to avoid/minimize impacts to health, life and property and quality of life and to minimize the possibility of conflicts between private and federal land management?

**Monitoring Requirements:** At least 20 percent of all actions within the identified rural interface areas will be examined to determine if special project design features and mitigation measures were included and implemented as planned.

**Monitoring Performed:** The South Bly and Klamath falls Forest Estates burns were monitored. Monitoring the Bly Mountain timber sale near Klamath Forest Estates cannot be conducted until the sale is completed. The sale was not logged in FY 1999 as anticipated. The sale must be completed in FY 2001. No projects have been completed in the Harpold Dam or the Grenada Butte rural interface areas.

**Findings:** Monitoring of the Bly Mountain timber sale must wait until the sale has been completed. Prior to preparing the timber sale, silviculture prescription and associated environmental documents adjacent landowners were contacted and requested to identify their concerns about the proposed sale. The primary concern expressed was how the timber stands would look after the trees were removed. A demonstration area inside an earlier burn was set up to show residents what trees would be removed and what the timber sale area=s appearance would be several years after the prescribed burn. Other concerns identified included: the unmerchantable material remaining after harvest for firewood should be made available for public use, and, the road maintenance association was concerned about potential damage occurring from timber hauling. The timber purchaser would be required to maintain the road.

**Conclusion:** Post treatment monitoring of the timber sale is recommended to compare residual timber stand characteristics with rural interface area objectives and the silvicultural prescription. Consultation with neighboring landowners will be beneficial to obtain their views on the prescribed fire and timber sale treatments. Measuring the amount of fuel reduction accomplished by the prescribed burns will assist in future prescribed fire actions.

## Recreation (RMP/ROD, Appendix K, page K-19)

### Expected Future Conditions and Outputs

- Provision of a wide range of developed and dispersed recreation opportunities that contribute to meeting projected recreation demand within the planning area.
- Provision of non-motorized recreational opportunities and creation of additional opportunities consistent with other management objectives.

## Implementation Monitoring

**Monitoring Question 1:** What is the status of the development and implementation of recreation plans?

**Findings:** The BLM has initiated the analysis for the upper Klamath River Wild and Scenic River management plan/environmental impact statement (EIS). Recreation management (including proposed alternatives for non-motorized recreation opportunities) is a component of this river plan. A draft of the "Upper Klamath River Management Plan/EIS and Resource Management Plan Amendments", is scheduled to be released in late Spring 2002. A

memorandum of understanding has been signed with the Oregon State Parks and Recreation Department on joint management of the Wild and Scenic River/State Scenic Waterway. A separate chapter of the river plan will address State Scenic Waterway issues.

Analysis of issues and projects has been completed for the Hamaker Mountain Special Recreation Management Area (SRMA), and has been started for the Stukel Mountain SRMA. No timeline for completing more comprehensive recreation plans for these areas is proposed.

Site-specific design and planning along with ongoing facility upgrades and renovations continue to be implemented through Recreation Pipeline Restoration Funds under the existing Klamath Falls RMP and Wood River Wetland RMP.

## **Special Areas (RMP/ROD, Appendix K, page K-13)**

### **Expected Future Conditions and Outputs**

- Maintenance, protection, and/or restoration of the relevant and important values of the special areas which include: Areas of Critical Environmental Concern, Research Natural Areas, and Environmental Education Areas.
- Preservation, protection, or restoration of native species composition and ecological processes of biological communities in research natural areas.
- Retention of existing research natural areas and existing areas of critical environmental concern that meet the test for continued designation. Retention of other special areas. Provision of new special areas where needed to maintain or protect important values.

### **Implementation Monitoring**

#### **Monitoring Question 1:**

Are BLM actions and BLM authorized actions/uses near or within special areas consistent with resource management plan objectives and management direction for special areas?

**Monitoring Requirement:** Annually, the files on all actions and research proposals within and adjacent to special areas will be reviewed to determine whether the possibility of impacts on areas of critical environmental concern values was considered, and whether any mitigation identified as important for maintenance of areas of critical environmental concern values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether it was actually implemented.

**Monitoring Performed:** Review of program and actions for consistency with RMP objectives and direction.

**Findings:** The Wood River Area of Critical Environmental Concern (ACEC) has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints. The project has its own published annual monitoring report, covering a wide range of resources.

A prescribed fire originally planned for FY 2000 will be implemented in 2002 and allowed to burn into the Old Baldy RNA/ACEC. Prescribed fire monitoring plots were established in 1999 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program (ONHP). The prescribed fire program is being implemented by the Klamath Falls Resource Area through a service contract.



Treatment of noxious weed populations is conducted annually within the Klamath Canyon ACEC. An integrated management approach is used which includes chemical, mechanical and biological methods. Control of noxious weeds would help maintain and restore the biological, recreational and scenic resources for which the area was designated.

**Conclusions:** BLM actions and BLM authorized actions/uses near or within special areas are consistent with resource management plan objectives and management direction for special areas.

### **Monitoring Question 2:**

What is the status of the preparation, revision, and implementation of areas of critical environmental concern management plans?

**Findings:** The Wood River ACEC has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints. Many of the restoration and interpretation actions have been initiated or completed, including river re-channelization, interpretive displays, and scenic view areas. Implementation and management direction has been closely coordinated with the Klamath Tribes. The project has its own published annual monitoring report, covering a wide range of resources.

Management of the Klamath Canyon ACEC will be addressed in the management plan for Wild and Scenic River values within the State of Oregon Wild and Scenic River/State Scenic Waterway plans beginning in FY 2000 and completed in FY 2003.

The Old Baldy RNA/ACEC was designated to fill the southern Cascades chaparral plant community cell. This community is thought to be partially maintained by fire. Therefore, prescribed fire planned for FY 02 will be allowed to burn into the RNA. Prescribed fire monitoring plots were established in 1999 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program. These actions will help maintain and protect the resource values for which the area was designated.

No other management plans for ACECs have been developed. However, all ACECs are managed to protect the relevant and important values, which were identified when they were evaluated and designated during the RMP process. General management direction for each special area is given in the Klamath Falls Resource Area Record of Decision and Resource Management Plan and Range Program Summary (pp. 41 - 42).

**Conclusions:** Management plans for some ACECs are or have been developed and implemented.

**Monitoring Question 3:** What environmental education and research initiatives and programs are occurring in the research natural areas and environmental education areas?

**Findings:** The Old Baldy RNA/ACEC includes additional lands within the Medford District. A prescribed fire planned for FY 01 will be allowed to burn into the RNA. Prescribed fire effects monitoring plots were established in 1999 according to protocols developed by the National Park Service to study the effects of fire on this plant community. These pre-burn data were collected by a researcher from the Oregon Natural Heritage Program.

The Clover Creek Environmental Education Area is the site of an annual Forestry School Tour. Sixth graders from all over Klamath County learn about reforestation, tree identification, soil and water conservation, fire, wildlife and outdoor recreation. This three-day event includes about 80 kids and a number of agencies including BLM, USFWS, USFS, ODFW, ODF and several private and county groups.

**Conclusions:** Environmental education and research initiatives and programs are occurring in the research natural areas and environmental education areas.

**Monitoring Question 4:** Are existing BLM actions and BLM authorized actions and uses not consistent with management direction for special areas being eliminated or relocated?

**Findings:** BLM actions and BLM authorized actions/uses near or within special areas are consistent with resource management plan objectives and management direction for special areas.

**Monitoring Question 5:**

- A) Are actions being identified which are needed to maintain or restore the important values of the special areas?
- B) Are the actions being implemented?

**Findings:** The Wood River ACEC has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints. Many of the restoration and interpretation actions have been initiated or completed, including river re-channelization, interpretive displays, and scenic view areas. Implementation and management direction has been closely coordinated with the Klamath Tribes. The project has its own published annual monitoring report, covering a wide range of resources.

The Old Baldy RNA/ACEC was designated to fill the southern Cascades chaparral plant community cell. This community is thought to be partially maintained by fire. Therefore, prescribed fire planned for FY 2002 will be allowed to burn into the RNA. Prescribed fire monitoring plots were established in 1999 according to protocols developed by the National Park Service, and pre-burn data were collected by a researcher from the Oregon Natural Heritage Program. These actions will help maintain and protect the resource values for which the area was designated.

Treatment of noxious weed populations is conducted annually within the Klamath Canyon ACEC. An integrated weed management approach is used which includes chemical, mechanical and biological methods. Control of noxious weeds would help maintain and restore the biological, recreational and scenic resources for which the area was designated.

**Conclusions:** Actions are being identified which are needed to maintain or restore the important values of the special, and the actions are being implemented.

## **Wild and Scenic Rivers (RMP/ROD, Appendix K, page K-16)**

### **Expected Future Conditions and Outputs**

- Protection of the Outstandingly Remarkable Values of designated components of the national Wild and Scenic Rivers System through the maintenance and enhancement of the natural integrity of river-related values.
- Protection of the Outstandingly Remarkable Values of eligible/suitable Wild and Scenic Rivers and the maintenance or enhancement of the highest tentative classification pending resolution of suitability and/or designation.
- Designation of important and manageable river segments suitable for designation where such designation contributes to the National Wild and Scenic Rivers System.



## Implementation Monitoring

**Monitoring Question 1:** Are BLM actions and BLM authorized actions consistent with protection of the Outstandingly Remarkable Values of designated or suitable rivers?

**Monitoring Requirements:** Annually, the files on all actions and research proposals within and adjacent to Wild and Scenic River corridors will be reviewed to determine whether the possibility of impacts on the Outstandingly Remarkable Values was considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether mitigation was actually implemented.

**Monitoring Performed:** The KFRA conducted the Oak thin/Juniper Removal project in FY 2001 on two parcels of land within the Upper Klamath Wild and Scenic River corridor. Mitigation measures were identified during project planning and environmental analysis to protect and enhance the Outstandingly Remarkable Scenic Value. Analysis of the on-the-ground affects after project completion indicated that the mitigation measures were followed and the overall project met or exceeded expectations.

BLM recreation staff members meet periodically with upper Klamath River outfitters and guides and staff members of PacifiCorp, the utility company that operates the hydroelectric plants above and below the designated Wild & Scenic segment. In FY 2001, a post-season meeting was held in November to review how the season went for the outfitters and to discuss the river management plan. Additional meetings were held in January and April to coordinate management activities, especially discussions regarding timing, volume, and duration of water releases during the peak rafting season.

**Findings:** One oak thinning/juniper removal project occurred within the W & S river corridor. Thinning of oak stands and removal of juniper is consistent with the W & S River Outstanding Remarkable Value. This project was designed to maintain long-term scenic resources through improving woodland health and reducing the opportunity for catastrophic wildfire. Whitewater rafting is consistent with maintaining the Outstandingly Remarkable recreation Value on the upper Klamath Wild and Scenic river.

### Monitoring Question 2:

- A) Are existing plans being revised to conform to Aquatic Conservation Strategy Objectives?
- B) Are revised plans being implemented?

**Findings:** An EIS for the Klamath River Management Plan is being developed for the eleven-mile portion of the Klamath River that is within the KFRA to conform with Aquatic Conservation Strategy Objectives. This EIS will be completed in approximately two years (2003).

**Monitoring Question 3:** Do actions and plans address maintenance or enhancement of the outstandingly remarkable values?

**Monitoring Requirements:** Annually, the files on all actions and research proposals within and adjacent to Wild and Scenic River corridors will be reviewed to determine whether the possibility of impacts on the Outstandingly Remarkable Values was considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether mitigation was actually implemented.

**Monitoring Performed:** The resource area had one oak thin and juniper removal project within the W & S river corridor in FY 2001. This thinning of woodland forests incorporated mitigation measures to protect short and long term scenic resource values. . A field trip

review of the on-the-ground affects after project completion indicated that the mitigation measures were followed and the overall project met or exceeded expectations. Individual trees were removed, and did not negatively affect Scenic River values.

**Findings:** The thinning of woodland forests to protect forest health and reduce fuel loadings was planned and monitored to maintain Scenic values.

## Socioeconomic Conditions (RMP/ROD, Appendix K, page K-18)

### Expected Future Conditions and Outputs

- Contributions to local, state, national, and international economies through sustainable use of BLM-managed lands and resources and use of innovative contracting and other implementation strategies.
- Provision of amenities for the enhancement of communities as places to live and work.

### Implementation Monitoring

**Monitoring Question 1:** What strategies and programs have been developed, through coordination with state and local governments, to support local economies and enhance local communities?

**Findings:** Since 1991, the resource area has been participating in a unique partnership of government and private recreation and tourism providers: Klamath/Lake/Modoc/Siskiyou County Outdoor Recreation Working group. The group meets approximately every two months, sharing information on projects, and events, exploring new opportunities for partnerships and coordination, and promotion of local tourism. For FY 2001, the Lakeview District provided \$6,000.00 to support this organization. The Wood River Wetland continues to a focus for cooperation and restoration efforts. The Hatfield Working Group, a citizen group commissioned by Senator Mark Hatfield continues to identify short and long-term restoration opportunities in the Klamath Basin and Northern California above Iron Gate Dam have identified and found funding sources for implementation of many restoration opportunities within the Klamath Basin.

The Klamath Falls Resource Area has coordinated with state governments in diverse activities such as recreation and timber sale planning, fish habitat inventory, water quality monitoring, hazardous material cleanup, air quality maintenance, and wildfire suppression.

**Monitoring Question 2:** Are RMP implementation strategies being identified that support local economies?

**Findings:** In 2001, the majority of the support for local economies came from fuel reduction and vegetation manipulation contracts that employed local people. The Resource Area spent approximately 4.6 million dollars on these contracts. The Jobs-in-the-Woods program monies (\$200,000) also were used for vegetation manipulation and fuel reduction with local organizations or contractors. Contractors were encouraged to hire local farmers to off set the financial impacts resulting from the drought. Recreation facilities in such areas including the upper Klamath River and several campgrounds (Gerber, and Topsy) received infrastructure enhancements to improve visitor experiences and meet user expectations. Additional enhancements such as construction of new trails, designated back county by-ways, interpretive displays, and brochures will be developed as funding allows.



**Monitoring Question 3:** What is the status of planning and developing amenities that enhance local communities, such as recreation and wildlife viewing facilities?

**Findings:** Reference Monitoring Question Findings in # 1 and 2 above, and in the sections addressing Recreation, Wildlife and the Wood River Wetland area accomplishments in this document.

## **Timber Resources (RMP/ROD, Appendix K, page K-20)**

### **Expected Future Conditions and Outputs**

- Provision of a sustained yield of timber and other forest products.
- Reduction of the risk of stand loss due to fires, animals, insects, and diseases.
- Provision of salvage harvest for timber killed or damaged by events such as wildfire, windstorms, insects, or disease, in a manner consistent with management objectives for other resources.
- Maintenance or restoration of healthy ecosystems while providing for the harvest of timber and other forest products in balance with other resource values and needs.

### **Implementation Monitoring**

**Monitoring Question 1:** By land-use allocation, how do timber sale volumes, harvested acres, and the age and type of regeneration harvest stands compare to the projections in the SEIS ROD Standards & Guidelines and RMP management objectives?

**Monitoring Performed:**

Below is a summary by land use allocation of the timber volume and acreage that has been harvested in the KFRA since the signing of the RMP on June 2, 1995. The volume and acres are summarized by year, harvest method, land allocation, RMP/EIS Assumed Average, and Percent of Assumed average. All KFRA westside lands are in the Southern General Forest Management Area (SGFMA). All KFRA eastside lands are outside the boundaries of the Northwest Forest Plan.

**Findings:** There is some discrepancies between actual treatments acres and the projected average. These discrepancies are discussed in detail in the discrepancy section.

**Monitoring Question 2:** Were the silvicultural (for example, planting with genetically selected stock, fertilization, release, and thinning) and forest health practices anticipated in the calculation of the expected sale quantity, implemented?

**Monitoring Requirements:** An annual district wide report will be prepared to determine if the silvicultural and forest health practices identified and used in the calculation of the probable sale quantity were implemented. This report is summarized in this Annual Program Summary.

**Findings:**

Completed silvicultural treatments are shown in Table 1 of this Annual Program Summary and Table 46. Calculation of the ASQ was based on successful planting of regeneration units and normal stand development unimpeded by excessive vegetative competition or animal damage, and also taking into consideration precommercial thinning when needed. (Yield gains were not assumed for planting genetically selected trees, fertilization, or pruning.)

**Table 46. Klamath Falls Resource Area Timber Sale Volume and Acres**

Entire Resource Area											
Timber Sale Volume In Thousand Board Feet (MBF)											
COMBINED EASTSIDE AND WESTSIDE	FY 95	FY 96	FY 97	FY 98	FY 99	FY00	FY01	95-01 Total	95-01	95-01 Average	Percent Assumed
									Annual Average	RMP/EIS Assume Annual Average	
Total Timber Sale Program	4516	7247	6667	5925	3546	9594	2963	40457	5780		
Total Matrix Timber Sales	4397	7162	6624	5883	3493	9275	2939	39773	5682	6310	90%
Total All Reserves	119	85	43	42	53	319	24	685	98		
Total Key Watersheds	3116	6990	6087	2576	2155	4702	0	25626	3661		
Total Regeneration Harvests	0	0	0	0	0	153	0	153	22		
Total Density Mgt	3399	4012	1802	5435	1024	7206	2939	25816	3688		
Total Mortality Salvage	990	3150	4776	448	2469	1893	0	13726	1961		
Total Small Sales	4	0	46	0	0	23	24	97	14		
Total R/W Clearing	4	0	0	0	0	0	0	4	1		
Total UMLSR	0	0	22	0	0	0	0	22	3		
Total RR	64	83	21	42	53	48	0	311	44		
Total Admin Withdrawal	55	2	0	0	0	271	24	352	50		
Timber Sale Area In Acres											
Total Timber Sale Program	1859	2459	3761	1926	906	3129	1257	15297	2185		
Total Matrix Timber Sales	2081	2440	3759	1919	866	3035	1207	15307	2187	1261	173%
Total All Reserves	66	19	2	7	40	94	50	278	40		
Total Key Watersheds	793	2440	3550	440	210	1214	0	8647	1235		
Total Regeneration Harvests	0	0	0	0	0	39	0	39	6	164	3%
Total Density Mgt	1081	440	209	1869	606	2746	1207	8158	1165	1097	106%
Total Mortality Salvage	1000	2000	3550	50	260	250	0	7110	1016		
Total Small Sales	0	0	0	0	0	0	50	50	7		
Total R/W Clearing	2	0	0	0	0	0	0	2	0		
Total UMLSR	0	0	2	0	0	0	0	2	0		
Total RR	36	19	0	7	40	34	0	136	19		
Total Admin Withdrawal	30	0	0	0	0	60	50	140	20		

\* Density Management - All partial harvests, except salvage, including commercial thinning and selective cutting in Matrix and Riparian Reserves.

\*\* 1995-2000 Annual Average - The annual average is calculated by full fiscal years for 1995-2001.

\*\*\* ASQ = Allowable Sale Quantity based on RMP from lands allocated to planned, sustainable harvest



**Table 47. Silviculture Monitoring Projects**

Westside		Eastside	
Treatment/Total acres	Project/acres	Treatment/Total acres	Project/acres
Vegetation control, mechanical/hand Total = 400 acres	Summit Point/62 acres	None	None
	Chase Mountain/41 acres		
	Kent Circle/91 acres		
	Spencer Swamp/51 acres		
	Cold Creek/60 acres		
Pre-commercial thinning Total = 144 acres	Buck Mountain/95 acres	Pre-commercial thinning Total = 121 acres	Stukel Mtn./121 acres
	Muddy Tom TS/56 acres		
Understory reduction Total = 419 acres	Grenada Butte/88 acres	None	None
	East Grenada TS 419 acres		
Tree planting units Total = 74 acres	Frosty TS/23 acres	Tree planting units Total = 23 acres	Bryant Mtn./23 acres
	Kakapo TS/41 acres		
Site preparation Total = 28 acres	Spencer Hookup Rd/1 acre	None	None
	Rehab old roads/9 acres		
	Frosty TS/28 acres		

All timber sale silvicultural prescriptions and watershed analyses considered forest health practices. In each prescription, retention and maintenance of underrepresented species was emphasized to help increase the pine species composition in stands where historically, the composition of pine was higher. These are generally located in the mixed conifer forest types in the Spencer Creek and Jenny Creek drainages. Even in the mortality salvage sales, some thinning was done around the larger old growth for enhancement purposes. Elevated fuel level concerns were primarily addressed in the density management sale prescriptions. All prescriptions were designed to leave harvested stands with reduced fuel loads, with a lower risk for a stand replacing fire, and in a condition where post-project underburns could be implemented in the stand.

**Conclusion:** Silvicultural and forest health practices were anticipated and are being implemented. The excess mortality that has occurred was not anticipated and as a result, a modification in treatment prescriptions has been necessary.

## Special Forest/Natural Products (RMP/ROD, Appendix K, page K-21)

### Expected Future Conditions and Outputs

- Production and sale of special forest/natural products when demand is present and where actions taken are consistent with primary objectives for the land use allocation.
- Utilization of the principles of ecosystem management to guide the management and harvest of special forest products.

## Implementation Monitoring

**Monitoring Question 1:** Is the sustainability and protection of special forest/natural product resources ensured prior to selling special forest products?

**Findings:** To date, sustainability of special forest products has not been an issue because the demand has been primarily on special/natural products, which can be readily found. Permits have been issued for wood products including; firewood, sawlogs, posts, and poles. Additional special forest products that have been sold include; juniper boughs, Christmas trees, mushrooms, greenery, lichen, cones, and transplants. The only permit request denied to date has been the cutting of incense cedar boughs. The denial was due to the on-going mortality of incense cedar in many stands south of Highway 66. When selling lichens, bryophytes, and certain fungi, resource specialist are consulted prior to issuing any unique permits.

With the recent shortage of power concerns throughout the west, there are some on-going discussions and plans for additional small co-generation power plants that would be fueled by biomass. The KFRA has two potential sources of biomass that could be utilized for fuel. One source would be western juniper trees that have encroached on thousands of acres of rangeland. Another source would be residual slash as a result of various treatments including; logging operations, precommercial thinning, hazardous fuel reduction treatments for fire, and watershed restoration and wildlife projects that involve juniper cutting. The KFRA analyzed treating up to 1,000 acres per year of western juniper in the RMP in addition to range allotment improvements where juniper cutting was also analyzed. The capability of providing western juniper on a sustained basis for power plants, and to meet the needs of the public for personal use as well, may eventually need to be addressed.

**Conclusion:** At the present time, based on the different resource evaluations completed thus far, and permits issued to date, sustainability of Special Forest Products is not threatened.

**Monitoring Question 2:** What is the status of the development and implementation of specific guidelines for the management of individual special forest/natural products?

**Findings:** The Klamath Falls Resource Area received from the Oregon State Office an updated Handbook 5400-2 addressing Special Forest Products in June of 1995. In addition, the Klamath Falls Resource Area individually develops specific harvesting guidelines for products to ensure sustainability and permit compliance. For example, for bough harvest, permittees are required to follow specific guidelines to assure survival of the tree from which the boughs are removed. In addition, specific guidelines are written for harvesting mushrooms to ensure sustainability. Although most small sales permits generally result in minimal resource impacts, specification are included in the permits that addresses weather, roads, fire risk, sustainability, cultural, and other resource concerns.

The Klamath Falls Resource Area initiated a number of pre treatment monitoring plots in juniper treatment areas in FY 2001. These plots are designed to monitor vegetation response from juniper cutting and in some cases removal. In addition, the plots are designed to monitor soil impacts from the different equipment used to cut and remove the juniper. A post treatment qualitative review was completed by a number of specialists in the fall of 2001. A summary of the results of that review is available on request.

**Conclusion:** Based on field experience, and the small number of permits issued for products, sustainability of Special Forest Products in the immediate future is assured.



## Grazing Management (RMP/ROD, Appendix K, page K-22)

### Expected Future Conditions and Outputs

- The livestock and wild horse grazing programs will be managed under the principles of multiple use and sustained yield. Monitor the existing grazing allotments and the wild horse herd management area in compliance with the established "Coordinated Monitoring and Evaluation Plan for Grazing Allotments" for the Klamath Falls Resource Area.
- Monitoring data will be the foundation to support adjustments in the management of grazing use by livestock and wild horses. Evaluation of the monitoring data, in relation to the identified allotment objectives in this Proposed Resource Management Plan as well as future standards and guidelines, will be completed through a team of interdisciplinary resource specialists, with public review as appropriate.

### Implementation Monitoring

**Monitoring Question 1:** Are allotments and herd management area goals and objectives being achieved with current management as specified on an allotment specific basis?

**Monitoring Performed:** Rangeland monitoring studies have been completed during FY 1995-2001 in accordance with KFRA's *Coordinated Monitoring and Evaluation Plan for Grazing Allotments*. This directs the most monitoring emphasis on high priority (management category "I") allotments, including the two allotments (Dixie and Edge Creek), which constitute the Pokegama HMA. Of particular importance are the 3 allotments in the Gerber Block – Horsefly, Dry Prairie, and Pitchlog - that are under ESA Section 7 consultation. This includes various rangeland condition, trend, and utilization studies; riparian classification, condition, and photo trend studies; actual grazing use supervision and information; Ecological Site Inventory (though not actually monitoring, this survey does help support and direct the other rangeland monitoring); and other rangeland monitoring studies as needed. On low priority allotments (virtually all of the "C" category allotments) monitoring is done on an as needed basis depending on problems or concerns that arise at some given point in time. Typically this is some situational, short term grazing administration problem that occurs on an allotment, needs some type of management attention to solve, the effects of which need monitored (usually use supervision) to ensure that the problem was properly and adequately addressed.

The Pokegama HMA has been aerial and/or ground censused every year since completion of the KFRA ROD/RMP. In 2001, the current herd population level has been estimated to be between 30-35 head, based on an aerial census (February 2001) supplemented by numerous ground observations.

**Findings:** Rangeland monitoring studies established, read, and re-read over the past 10 grazing seasons (FY 1992-2001) have found that grazing use on priority allotments is within land use planning and other pertinent resource objective levels and requirements. Priority allotments include the 14 "I" category, 4 "M" category, and 1 "C" category allotments (allotment categorization is explained in the KFRA ROD/RMP - pages H-69-70). The combined acreage of these priority allotments comprises 60% of the KFRA grazing land base. Yearly priorities also include a number of "C" allotments that need attention based on any of a variety of grazing administration problems or issues. Recent watershed analysis efforts, allotment evaluations, and Rangeland Health Standards Assessments have supported the above finding. However, the amount of information collected is more than can be

summarized in this APS; this information and the various evaluations and assessments are available at the KFRA.

For the Pokegama HMA, the herd was found to be above the determined Appropriate Management Level (AML) of 30 to 50 head in 1996 and 2000. (The AML was established based on properly evaluated rangeland monitoring studies performed over time that have determined the current number is appropriate to a self-sustaining population of healthy animals in balance with other uses and the productive capacity of their habitat.) Because the AML was exceeded, wild horse removals were necessary to get back to AML; this was accomplished by bait-trapping performed by Resource Area personnel during the spring/summer/fall of 1996 and again in May/June 2000. In 1996 (20 horses) and 2000 (18 horses) were removed from the HMA and transported to the Burns, Oregon wild horse corrals for adoption via the Bureau's Adopt-a-Horse program.

**Conclusion:** The answer to this monitoring question is "generally yes", on a priority allotment basis. This means that allotments in the "I" and "M" categories, those that are identified for livestock use reductions in the RMP, are under ESA Section 7 consultation, contain important perennial streams, and/or have other critical resource issues, are receiving the most attention and management action and are at, or moving significantly towards, meeting Land Use Plan (LUP) objectives. The Pokegama HMA is also meeting LUP objectives and goals. Lower priority "C" allotments are generally also meeting the minimal objectives set for these areas. The currently ongoing process of assessing all allotments (including low priority "C" category ones) to ensure the meeting of the Standards for Rangeland Health will determine if allotments are meeting resource objectives, and if not, management will be adjusted to ensure the future meeting of objectives. This process, which began in 1999, is scheduled to extend through 2008; ten years as specified by current BLM policy and direction.

**Monitoring Question 2:** Are the appropriate standards and guidelines, applicable to livestock and wild horse grazing, being correctly applied and followed?

**Findings:** See response to #1 above.

**Monitoring Question 3:** Are rangeland improvement projects consistent with meeting the objectives of all resources addressed in this Resource Management Plan as well as the Aquatic Conservation Strategy and Late-Successional/District Designated Reserve objectives?

**Monitoring Performed:** Monitoring of rangeland improvements is done in conjunction with normal grazing use supervision and rangeland monitoring field visits to grazing allotments. This monitoring is typically to determine if a given rangeland improvement is functioning as it should, i.e. fence is intact, spring is flowing, etc. If not, the project is repaired or reconstructed by the BLM (typically maintenance of riparian projects), or the grazing user is notified and required to fix the problem if the project is their maintenance responsibility (grazing regulations at 43 CFR 4100). An estimated 20-25 grazing improvement projects are checked annually.

**Findings:** No existing rangeland improvements are known to conflict with the objectives stated in this monitoring question.

**Conclusion:** All rangeland projects (new or existing) are believed to be consistent with the meeting of the listed LUP objectives. If projects are found in the future that are inconsistent, they will be altered or removed. All future proposed projects will be reviewed to ensure consistency.



## **Noxious Weeds (RMP/ROD, Appendix K, page K-23)**

### **Expected Future Conditions and Outputs**

- Containment and/or reduction of noxious weed infestations on BLM-administered land using an integrated pest management approach.
- Avoidance of the introduction or spread of noxious weed infestations in all areas.

### **Implementation Monitoring**

**Monitoring Question 1:** Are noxious weed control methods compatible with Aquatic Conservation Strategy Objectives?

**Monitoring Requirements:** Review the files of at least twenty percent of each year's noxious weed control applications to determine if noxious weed control methods were compatible with Aquatic Conservation Strategy Objectives.

**Findings:** Noxious weed control applications in FY 2001 were conducted using an integrated pest management approach that includes manual, mechanical, chemical, and biological control methods. These methods are used in accordance with the Klamath Falls Resource Area Integrated Weed Control Plan (IWCP) and Environmental Assessment (EA)(OR-014-93-09), which is tiered to the Northwest Area Noxious Weed Control Program EIS (December 1985) and Supplement (March 1987), and are compatible with Aquatic Conservation Strategy Objectives.





# GLOSSARY/ACRONYMS

**Allowable Sale Quantity (ASQ)** - An estimate of annual average timber sale volume that can be harvested from lands allocated to be planned, sustainable harvest. ASQ is used interchangeably with PSQ in this Annual Program Summary to avoid confusion related to technical differences in their definitions.

**Alternate Dispute Resolution (ADR)** - Given the complexity of the Adjudication and other water allocations issues in the Klamath Basin, the Oregon Water Resources Department (WRD) has initiated a voluntary alternative dispute resolution (ADR) process to provide a forum to address Adjudication claim issues and other matters related to water supply and demand in the Klamath Basin.

**Appropriate Management Level (AML)** - The optimum number of wild horses (or burros) within a Herd Management Area (HMA) that results in a thriving ecological balance and avoids a deterioration of the range. Numbers above the AML are considered "excess" and must be removed.

**Animal Unit Month (AUM)** - Amount of forage required to sustain one cow and calf, or one horse, or five sheep, for one month.

**Annual Program Summary (APS)** - A review of the programs on a district or resource area for a specific time period. For the KFRA, the APS is for the time period October 1, 1999 thru September 30, 2000.

**Aquatic Conservation Strategy (ACS)** -

A strategy developed to restore and maintain the ecological health of watersheds and aquatic ecosystems within the planning area addressed by the Northwest Forest Plan.

**Archaeological Site** - A geographic locale that contains the material remains of prehistoric and/or historic human activity.

**Archaeological Resource Protection Act (ARPA)** (P.L. 96\_95; 93 Stat. 721; 16 U.S.C. 470aa et seq.) as amended (P.L. 100\_555; P.L. 100\_588) - provides felony-level penalties, more severe than those of the Antiquities Act of 1906 (see .03A), for the unauthorized excavation, removal, damage, alteration, defacement, or the attempted unauthorized removal, damage, alteration, or defacement of any archaeological resource, more than 100 years of age, found on public lands or Indian lands. The act also prohibits the sale, purchase, exchange, transportation, receipt, or offering of any archaeological resource obtained from public lands or Indian lands in violation of any provision, rule, regulation, ordinance, or permit under the act, or under any Federal, State, or local law. No distinction is made regarding National Register eligibility. The act establishes definitions; permit requirements, and criminal and civil penalties, among other provisions, to correct legal gaps and deficiencies in the Antiquities Act (see .03A). The act overlaps with and partially supersedes the Antiquities Act.

**Area of Critical Environmental Concern (ACEC)** - An area of BLM administered lands where special management attention is needed to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources, or other natural systems or processes; or to protect life and provide safety from natural hazards.

**Best Management Practices (BMP)** - Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

**Biological Diversity** - The variety of life and its processes, including a complexity of species, communities, gene pools, and ecological function.

**Biological Opinion (BO)** - A determination reached for endangered fish or wildlife species that is issued by the USFWS through consultation with another agency. This opinion evaluates the potential impacts to a species from a specific project and provides recommendations for protection of the viability of the species.

**Board Foot** - A unit of solid wood, one-foot square and one inch thick.

**Bureau Assessment Species** - Species on List 2 of the Oregon natural heritage Database, or those species on the Oregon List of Sensitive Wildlife Species (OAR 635-100-040), that are identified in BLM Instruction Memo OR-91-57, and are not included as a Federal candidate, state listed, or bureau sensitive species.

**Bureau of Land Management (BLM)** - Agency within the Department of the Interior, charged with management of the public lands.

**Bureau Sensitive Species** - Species Eligible as federally listed or candidate, state listed or state candidate (plant) status, or on List 1 in the Oregon National Heritage Database, or otherwise approved for this category by the State Director.

**Candidate Species** - Those plants and animals included in Federal register Notices of Review that are being considered for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS). There are two categories of primary concern to BLM:

**Category 1** - Taxa for which the USFWS has substantial information on hand to support proposing the species for listing as threatened or endangered. Listing proposals are either being prepared or have been delayed by higher priority listing work.

**Category 2** - Taxa for which the USFWS has information to indicate that listing is possibly appropriate. Additional information is being collected.

**Categorical Exclusion (CX)** - A categorical exclusion is used when it has been determined that some types of proposed activities do not individually or cumulatively have significant environmental effects and may be exempt from requirements to prepare an environmental analysis. Categorical exclusions (CX) are covered specifically by Department of Interior and BLM guidelines.

**Cavity Nesters** - Wildlife species, most frequently birds, that require cavities (holes) in trees for nesting and reproduction.

**Clean Water Act (CWA)** - the Clean Water Act is the primary Federal statute governing the restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters.

**Coarse Woody Debris (CWD)** - Woody pieces of trees that have been detached from their original source of growth (dead trees that are not self-supporting shall be considered severed). This includes up-rooted trees and any severed stems or branches attached to them. It does not include: live trees, dead limbs or branches attached to a dead tree, stumps, dead foliage, bark, or designated shrub species.

**Coordinated Resource Management Plan (CRMP)** - A resource management plan covering a specific geographical area, typically with a mixed land ownership pattern, that coordinates with all interested land owners and affected government agencies to manage for a wide array of resources and resource concerns. This process emphasizes mutually agreed upon goals and a cooperative, instead of confrontational, approach.

**Council on Environmental Quality (CEQ)** - Government agency with oversight of the implementation of the National Environmental Policy Act (NEPA).

**Cubic Foot (CF)** - A unit of solid wood, one foot square and one foot thick.

**Cumulative Effect** - The impact that results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

**Density Management (DM)** - Cutting of trees for the primary purpose of widening their spacing so that growth of remaining trees can be accelerated. Density management harvest can also be used to improve forest health, to open the forest canopy, or to accelerate the attainment of old growth characteristics.

**Department of Environmental Quality (DEQ)** - A department of Oregon State government with responsibilities to oversee the state's environmental laws.



**Diameter at Breast Height (DBH)** - The diameter of a tree 4.5 feet above the ground on the uphill side of the tree.

**District Designated Reserves (DDR)** - Areas designated for the protection of specific resources, flora and fauna, and other values. These areas are not included in other land use allocations nor in the calculation of the PSQ.

**Ecological Site Inventory** - BLM's rangeland survey method has four seral stages based on similarity to the perceived Potential Natural Community. Those stages are Early Seral, Mid Seral, Late Seral and Potential Natural Community.

**Eligible River** - A river or river segment found, through interdisciplinary team and, in some cases, interagency review, to meet Wild and Scenic River Act criteria of being free flowing and possessing one or more Outstandingly Remarkable Values.

**Ecosystem Restoration Office (ERO)** - The ERO is an interagency office which is operated cooperatively by the U.S. Fish and Wildlife Service, Bureau of Reclamation, U.S. Forest Service and the BLM. This interagency office provides funding, technical assistance, and monitoring for watershed restoration projects which are proposed by the Upper Klamath Basin Working Group. This group works closely with the Klamath Basin Provincial Advisory Committee and watershed councils within the Klamath Basin.

**Endangered Species** - Any species defined through the Endangered Species Act of being in danger of extinction throughout all or a significant portion of its range and published in the Federal Register.

**Endangered Species Act** - Act created in 1973 that identified on a National List, any plant, animal or fish that is in danger of extinction throughout all or a significant portion of its range. Species that are threatened, proposed and candidate status, have a consultation process for projects with the USFWS which administers the National List.

**Environmental Assessment (EA)** - A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment; and whether a formal Environmental Impact Statement is required; and to aid an agency's compliance with NEPA when no EIS is necessary.

**Environmental Education Area (EEA)** - Area used to inform and educate the public on topics relating to the environment(s) found within the KFRA.

**Environmental Impact Statement (EIS)** - Type of document prepared by Federal agencies in compliance with the National Environmental Policy Act (NEPA) that identifies the environmental consequences of proposed major Federal actions expected to have significant impacts on the human environment.

**Federal Energy and Regulatory Commission (FERC)** - Government agency with responsibility for issuing permits and license for power projects.

**Fiscal Year (FY)** - Budgeting year for the BLM from October 1 thru September 30 each year.

**Geographic Information System (GIS)** - Computer Database of resource information.

**Global Positioning System (GPS)** - Satellite technology used to locate a specific point on the ground.

**Green Tree Retention (GTR)** - Within the KFRA, a term for leaving green trees in a stand when planning a regeneration cut timber sale. Typically, between 16-25 trees per acre, will be retained in the stand.

**Hazardous Materials** - Anything that poses a substantive present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

**Herd Management Area (HMA)** - Public land under the jurisdiction of the Bureau of Land Management that has been designated for special management emphasizing the maintenance of an established wild horse herd. HMAs are defined by the "Wild Free-Roaming Horse and Burro Act" of 1971.

## *Klamath Falls Resource Area*

**Interdisciplinary Team (IDT)** - A team of resource specialists organized by agencies to prepare environmental documents.

**Integrated Weed Control Plan (IWCP)** - The plan and programmatic EA for noxious weed management within the KFRA approved in 1993.

**Intermountain West Joint Venture (IWJV)** - The IWJV was formed in 1995 and covers eastern Oregon and parts of nine other western states. This group meets quarterly and is in the process of writing an area plan to determine conditions of wetlands and identify opportunities to improve wetland habitat. The plan (in development) will focus on the Klamath Basin eco-region. This plan, as well as other eco-regions plan within the ten western states, is following the guidelines outlined under the North American Wetlands Conservation Act of 1989. The representatives for the Klamath Basin eco-region are BLM, Ducks Unlimited, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Modoc National Forest, California Fish and Game, and Oregon Joint Venture. The plan is expected to be completed within two years.

**Klamath Falls Resource Area (KFRA)** - That portion of the BLM/Lakeview District located in the south end of Klamath County.

**Land Use Allocation (LUA)** - Allocations that define uses and or activities that are allowable, restricted, and prohibited. They may be expressed in terms of area such as acres or miles. Each allocation is associated with a specific management objective.

**Late-Successional Reserves (LSR)** - Lands managed to maintain and restore old-growth forest conditions.

**Matrix Lands** - Federal land outside of reserves and special management areas that will be available for timber harvest at varying levels.

**Memorandum of Understanding (MOU)** - A document between agencies or sovereign nations such as an Indian tribe, that discloses the protocol for how each party will coordinate and consult with each other relative to a particular activity or activities.

**Million Board Feet (MMBF)** - An expression of volume of trees harvested from timber sales, in millions of board feet.

**Monitoring and Evaluation** - Collection and analysis of data to evaluate the progress and effectiveness of on-the-ground actions in meeting resource management goals and objectives.

**Mortality Salvage** - Timber sales designed to utilize mortality (dead and /or dying trees). This primarily involves only the removal of the mortality within the stand. Normally, less than 10% of the volume removed is live trees in the mortality salvage sales.

**National Environmental Policy Act of 1969 (NEPA)** - Law requiring all federal agencies to evaluate the impacts of proposed major Federal actions with respect to their significance on the human environment.

**National Historic Preservation Act (NHPA)** - An act to establish a program for the preservation of additional historic properties throughout the nation, and for other purposes. This act extends the policy in the Historic Sites Act to include State and local as well as national significance, expands the National Register of Historic Places, and establishes the Advisory Council on Historic Preservation, State Historic Preservation Officers, and a preservation grants-in-aid program.

**Northwest Forest Plan (NFP)** - The plan for management of Forest Service and Bureau of Land Management late-successional and old-growth forest lands within the range of the northern spotted owl.

**Noxious Plant/Weed** - A plant designated by the U.S. department of Agriculture, or state or local weed board, as being injurious to public health, recreation, wildlife, or any public or private property.



**O&C Lands (O&C)** - Public lands granted to the Oregon and California Railroad Company, and subsequently re-vested to the United States, that are managed by the Bureau of Land Management and Forest Service under the authority of the O&C Lands Act.

**Oregon Department of Agriculture (ODA)** - A branch of Oregon State Government with responsibilities for agricultural activities, noxious weed management, and native plant conservation.

**Oregon Department of Environmental Quality (ODEQ)** - A department of Oregon State government with responsibilities to oversee the state's environmental laws.

**Oregon Department of Fish and Wildlife (ODFW)** - A branch of Oregon State Government with responsibilities for managing wildlife populations on federal and state lands.

**Offered (sold) Volume or Offered (sold) Acres** - Any timber sold during the year by auction or negotiated sales, including modifications to contracts. It should be noted that for this Annual Program Summary, offered is considered the same as sold.

**Off-Highway Vehicle (OHV)** - Any motorized track or wheeled vehicle designed for cross-country travel over natural terrain. The term, "Off Highway Vehicle" will be used in place of the term "Off Road Vehicle" to comply with the purposes of Executive orders 11644 and 11989. The definition for both terms is the same.

**Open** - Designated areas and trails where Off Highway Vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343.

**Limited** - Designated areas and trails where Off Highway Vehicles are subject to restrictions limiting the number or types of vehicles, date, and time of use; limited to existing or designated roads and trails.

**Closed** - Areas and trails where the use of Off Highway Vehicles is permanently or temporarily prohibited. Emergency use is allowed.

**Outstanding Natural Area (ONA)** - An area that contains unusual natural characteristics and is managed primarily for educational and recreational purposes.

**Outstandingly Remarkable Values (ORV)** - Values among those listed in Section 1 (b) of the Wild and Scenic Rivers Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values...". Other similar values that may be considered include ecological, biological or botanical, paleontological, hydrological, scientific, or research.

**Payment in Lieu of Taxes (PILT)** - Federal payments to local governments to offset losses in property taxes due to non-taxable Federal lands within their boundaries. BLM is responsible for calculating the payments according to formulas established by law and distributing the funds appropriated by Congress.

**Physical Habitat Simulation Model (PHABISM)** - A watershed model used to assess instream flows.

**Pre-commercial Thinning** - The practice of removing some of the trees less than merchantable size from a stand so that remaining trees will grow faster.

**Prescribed Fire** - A fire burning under specified conditions and designed to accomplish definite, define objectives.

**Probable Sale Quantity (PSQ)** - An estimated average annual volume that can be harvested from lands allocated to planned, sustainable harvest. PSQ is used interchangeably with ASQ in this Annual Program Summary to avoid confusion related to technical differences in their definitions.

**Projected Acres** - These "modeled" age class acres are estimates derived from modeling various silvicultural prescriptions for regeneration, commercial thinning and density management harvest. Modeled age class acre projections may or may not correspond to "Offered" or "Harvested" age class acres at a given point in the decade. Additional age classes are scheduled for regeneration, commercial thinning and density management harvest at other points in the decade.



**Protection Buffer Species** - Species designated in the Northwest Forest Plan that provides for specific management of known sites for these species, and, in many cases, requires surveys prior to ground disturbing activities.

**Rangeland Program Summary (RPS)** - A BLM planning document, typically completed in conjunction with an RMPs Record of Decision, that lays out the specifics for grazing management by grazing allotment. This includes allotment specific resource objectives, level and season of use, allotment categorization, wildlife allocations, and other information relevant to a give allotment.

**Resource Apprentice Program for Students (RAPS)** - A work experience program for high school students intended to give the students actual experiences in natural resource management.

**Regeneration Harvest** - Timber harvest with the objective of opening a forest stand enough to regenerate desired tree species.

**Regional Ecosystem Office (REO)** - Office established to provide staff work and support to the Regional Interagency Executive Committee (RIEC) so the standards and guidelines in the Northwest Forest Plan can be successfully implemented.

**Regional Interagency Executive Committee (RIEC)** - This group serves as the senior regional entity to assure the prompt, coordinated, and successful implementation of the forest management plan standards and guidelines at the regional level.

**Research Natural Area (RNA)** - An area that contains natural resource values of scientific interest and is managed primarily for research and educational purposes. Each RNA is also an Area of Critical Environmental Concern (ACEC).

**Resources and People (RAP) Camp** - This camp is designed to inform students (ages 15-18) and educators about natural resource management and careers working with natural resources.

**Resource Management Plan (RMP)** - A land use plan prepared by the BLM under current regulations in accordance with the Federal land Policy and Management Act.

**Right-of-Way (R/W)** - A permit or easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs, and the lands covered by such an easement or permit.

**Riparian Reserve (RR)** - Riparian Reserves are portions of watersheds where riparian-dependent resources receive primary emphasis and where special standards and guidelines apply. Riparian Reserves occur at the margins of standing and flowing water, intermittent stream channels and ephemeral ponds, and wetlands.

**Rural Interface Areas (RIA)** - Areas where BLM administered lands are adjacent to or intermingled with privately owned lands zoned for 1 to 20-acre lots or that already have residential development.

**Seral Stages** (Eastside rangeland communities) - The series of relatively transitory plant communities that develop during ecological succession from a community with no native plants (or possibly bare ground) to the potential natural community (PNC or climax) stage. There are four levels recognized by the Ecological Site Inventory, each of which is defined as the present state of vegetation on an ecological site in relation to the historic climax plant community for the site. The four stages are defined (for our area) as follows:

**Early Seral** – A plant community that exhibits 0-25% similarity to the historic climax plant community. Often these communities are dominated by exotic annual plant species or native species that are not typically found on the site (e.g. western juniper dominated sites that should not have much juniper). Site typical plant species are sparse to (rarely) absent.

**Mid Seral** - A plant community that exhibits 26-50% similarity to the historic climax plant community. These sites may or may not have functional plant communities, typically have a distinct overabundance of shrubs and/or juniper, have significant amounts of exotic annuals, and typically, have less half of the climax quantity of perennial native grasses.



**Late Seral** – A plant community that exhibits 51-75% similarity to the historic climax plant community. These communities are often very functional and stable, but may have a slight overabundance of shrubs or tree species, an slight to moderate under-abundance of native perennial grasses, and have some quantity of non-site typical plants species. Exotic annuals are sparse, though often present in small to insignificant quantities.

**Potential Natural Community (PNC)** – A plant community that has 76-100% of the historic climax plant community present. This are typically the most ecologically functional – and often stable - plant community that can exist on a site. Exotic annuals are rare to non-existent.

**Seral Stages** (Westside forest communities) - The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage. There are five stages recognized in forest succession:

**Early Seral Stage** - The period from disturbance to crown closure of conifer stands usually occurring from 0-15 years. Grass, herbs, or brush are plentiful.

**Mid Seral Stage** - The period in the life of a forest stand from crown closure to ages 15-40. Due to stand density, brush, grass, or herbs rapidly decrease in the stand. Hiding cover for wildlife may be produced.

**Late Seral Stage** - The period in the life of a forest stand from first merchantability to culmination of Mean Annual increment. This is under a regime including commercial thinning, or to about 100 years of age, depending on wildlife habitat needs. During this period, stand diversity is minimal, except that conifer mortality rates will be fairly rapid. Hiding and thermal cover may be present. Forage is minimal.

**Mature Seral Stage** - The period in the life of a forest stand from Culmination of Mean Annual Increment to an old growth stage of about 200 years. This is a time of gradually increasing stand diversity. Hiding cover, thermal cover, and some forage may be present.

**Old Growth** - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbance, the forest structure will be more even-aged at late mature or early old growth stages.

**Silvicultural Prescription** - A professional plan for controlling the establishment, composition, constitution, and growth of forests.

**Site Preparation** - Any action taken in conjunction with a reforestation effort (natural or artificial) to create an environment that is favorable for survival of suitable trees during the first growing season. This condition can be created by altering ground cover, soil or microsite conditions, using biological, mechanical, or manual clearing, prescribed burns, or a combination of methods.

**SEIS Special Attention Species** - A term that incorporates the “Survey and Manage” and “Protection Buffer” species from the Northwest Forest Plan.

**Southern General Forest Management Area (SGFMA)** (See Matrix) - Forest land managed on a regeneration harvest cycle of 60-110 years. All Matrix lands south of Grants Pass, Oregon are designated as SGFMA.

**Special Recreation Management Area (SRMA)** - Area having commitment to provide specific recreation activity and experience opportunities. These areas usually require high level of recreation investment and/or management. Include, but not limited to, recreation sites.

**Special Status Species** - Plant or animal species falling into any one of the following categories: Federally listed threatened or endangered species, species proposed for Federal listing as threatened or endangered, candidate species for Federal Listing, State listed species, Bureau sensitive species, Bureau assessment species (see separate definition of each).

## *Klamath Falls Resource Area*

**State Listed Species** - Any plant or animal species listed by the state of Oregon as threatened or endangered within the state under ORS 496.004, ORS 498.026, or ORS 564.040.

**Natural Resource Conservation Service (NRCS)** - A Federal agency that helps private landowners correct resource problems occurring on their land.

**Survey and Manage** - As outlined in the Northwest Forest Plan, the survey and manage standards and guidelines; provide benefits to old-growth associated species, which are considered to be at risk even after establishment of mapped and unmapped Late-Successional reserves.

**Target Volume** - As used in the document, target volume refers to the volume to be offered for sale as directed by the resource area annual budget.

**The Nature Conservancy (TNC)** - An environmental group that promotes returning managed lands to their historical or natural state.

**Threatened Species** - Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Listings are published in the Federal Register.

**Thousand Board Feet (MBF)** - An expression of volume of trees harvested from timber sales in thousands of board feet.

**Timber Sale Information System (TSIS)** - The national information system that tracks all facets of a timber sale/salvage.

**Total Maximum Daily Load (TMDL)** - A tool for implementing State water quality standards. It is based on the relationship between pollution sources and in-stream water quality standards. The TMDL establishes allowable pollutant loadings or other quantifiable parameters (such as temperature) for a water body and thereby provides the basis for States to establish water quality-based controls.

**Transportation Management Plan (TMP)** -

The transportation plan developed for a specific area or by a specific agency that provides how and what kinds of vehicles are allowed in that area.

**Unmapped Late Successional Reserves (UMLSR)** - a small block of forest approximately 100 acres in size designated around known spotted owl activity centers located on lands in the matrix. UMLSRs were established under the direction of the Northwest Forest Plan (NFP), but are not displayed on regional maps in the NFP. The objective for these areas is to protect and restore conditions for a variety of late successional and old growth dependent species.

**Understory Reduction** - Timber cutting done to reduce the density of primarily sub-merchantable (3-7 inch diameter) shade-tolerant species in the understory for the purpose of reducing fire risk and ladder fuels, as well as to enhance health of overstory trees.

**United States Fish and Wildlife Service (USFWS)** - That branch of the Federal Government with responsibility for enforcing the Endangered Species Act and managing the network of National Wildlife Refuge System Lands.

**United States Forest Service (USFS)** - An agency within the Federal Department of Agriculture with responsibility for management of the Federal National Forests.

**Visual Resource Management (VRM)** - The inventory and planning actions to identify visual values and establish objectives for managing those values, and the management actions to achieve visual management objectives.

**Water Quality Management Plan (WQMP)** - Plans required by the State of Oregon for management of rivers and tributaries to assure that total maximum daily loads are not exceeded.



**Water Resources Department (WRD)** - The Oregon Water Resources Department (WRD) initiated the Klamath Basin Adjudication in 1975. The Klamath Adjudication is an Oregon general water claim adjudication in which the final decree will be issued by the Klamath County Circuit Court. All Adjudication claims were filed with the WRD by April 1997. The Adjudication is the first Oregon general water adjudication in which complex federal claims have been filed.

**Watershed Council** - There is ongoing participation with the Klamath Watershed Council. The BLM is represented on the Councils' Technical Advisory Committees. The council is active in coordinating watershed and water quality enhancement projects.

**Whitewater Rafting (WR)** - The recreational activity of running a river in a rubber raft or other river non-motorized craft usually when river flows are high.

**Wilderness Study Area (WSA)** - Public land under the jurisdiction of the Bureau of Land Management that has been studied for wilderness character and is currently in an interim management status awaiting official wilderness designation or release from WSA status by Congress.

**Wildfire Situation Analysis (WFSA)** - An analysis used to determine priorities when multiple fire starts and lack of resources preclude the staffing of all new fires. The Wildfire Situation Analysis will be used to document this decision.

**Wild & Scenic River System (W&S)** - A National system of rivers or river segments that have been designated by Congress and the President as part of the national Wild and Scenic Rivers System (Public Law 90-542, 1968). Each designated river is classified as one of the following:

**Wild River** - A river or section of a river free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Designated wild as part of the Wild and Scenic Rivers System.

**Scenic River** - A river or section of river free of impoundments, with shorelines or watersheds still largely primitive and undeveloped but accessible in places by roads. Designated scenic as part of the national Wild and Scenic Rivers System.

**Recreational River** - A river or section of a river readily accessible by road or railroad, that may have some development along its shorelines, and that may have undergone some impoundment or diversion in the past. Designated recreational as part of the national Wild and Scenic Rivers System.

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